S. HRG. 101-259, PT. XV

# PREPARATION FOR THE 1990 FARM BILL

---

# HEARING

BEFORE THE

## COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

## S. 2227

TO AMEND THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT TO REFORM THE PROVISIONS OF SUCH ACT GOVERNING EXPORTED PESTICIDES, AND FOR OTHER PURPOSES

MARCH 28, 1990

PART XV

Printed for the use of the
Committee on Agriculture, Nutrition, and Forestry

U.S. GOVERNMENT PRINTING OFFICE
36-197 ⇆ WASHINGTON : 1991

S161-28

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

## COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

PATRICK J. LEAHY, Vermont, *Chairman*

DAVID H. PRYOR, Arkansas
DAVID L. BOREN, Oklahoma
HOWELL HEFLIN, Alabama
TOM HARKIN, Iowa
KENT CONRAD, North Dakota
WYCHE FOWLER, Jr., Georgia
THOMAS A. DASCHLE, South Dakota
MAX BAUCUS, Montana
J. ROBERT KERREY, Nebraska

RICHARD G. LUGAR, Indiana
ROBERT DOLE, Kansas
JESSE HELMS, North Carolina
THAD COCHRAN, Mississippi
RUDY BOSCHWITZ, Minnesota
MITCH McCONNELL, Kentucky
CHRISTOPHER S. "KIT" BOND, Missouri
PETE WILSON, California
SLADE GORTON, Washington

Charles Riemenschneider, *Staff Director*
James M. Cubie, *Chief Counsel*
Christine Sarcone, *Chief Clerk*
Charles Conner, *Staff Director for the Minority*

# CONTENTS

Page

Hearing held on: March 28, 1990 ..... 1

## WEDNESDAY, MARCH 28, 1990

## PREPARATION FOR THE 1990 FARM BILL

### Circle of Poison: The Pesticide Export Reform Act of 1990—S. 2227

- Leahy, Hon. Patrick J., a U.S. Senator from Vermont, opening statement ..... 10
  - Prepared statement ..... 11
- Lugar, Hon. Richard G., a U.S. Senator from Indiana, prepared statement ..... 12
- Wilson, Hon. Pete, a U.S. Senator from California ..... 7
  - Prepared statement ..... 8

## CHRONOLOGICAL LIST OF WITNESSES

- Gore, Hon. Albert, Jr., a U.S. Senator from Tennessee ..... 1
  - Prepared statement ..... 41
- Panetta, Hon. Leon E., a Representative in Congress from the 17th Congressional District, State of California ..... 3
  - Prepared statement ..... 43
- Synar, Hon. Mike, a Representative in Congress from the Third Congressional District, State of Oklahoma ..... 5
  - Prepared statement ..... 49
- Fisher, Linda J., Assistant Administrator for Pesticides and Toxic Substances, U.S. Environmental Protection Agency, Washington, DC ..... 13
  - Prepared statement ..... 53
- Aguirre, Ricardo, Deputy Chief of Mission, Embajada de Guatemala, letter of, dated September 22, 1989, to Sherell [Sherry] Sterling, Guatemala correspondence pertaining to dinoseb ..... 18
- Bolaños, Mercedes de Moreno, Ph.D., Ecuador ..... 20
  - Prepared statement ..... 71
  - Letters ..... 77
  - Examples of industry violations of FAO's Code of Conduct ..... 84
  - Marquardt, Sandra, Greenpeace, Washington, DC, prepared statement ..... 87
  - Letters:
    - Rengam, Sarojini (Ms.), pesticide campaign coordinator, International Organization of Consumers Unions, dated March 27, 1990, to Senator Patrick Leahy ..... 97
    - Weir, David, author/lecturer, dated March 26, 1990, to Senator Patrick Leahy ..... 99
  - Bangladesh: Committing Ecological Suicide With Pesticide by Tabibul Islam, dated March 20, 1990, Inter Press Service ..... 100
  - Highlights of the Pesticide Export Reform Act of 1990 ..... 102
- Bouis, Frank S., president, Florida Fruit & Vegetable Association, Orlando, FL ..... 26
  - Prepared statement ..... 104
- Vroom, Jay J., president, National Agricultural Chemicals Association, Washington, DC ..... 28
  - Prepared statement ..... 109

Page
McNichol, William J., Jr., member, board of directors, National Coalition Against the Misuse of Pesticides, Washington, DC ..... 32
  Letters:
    Short, Dr. Kate, executive officer, Toxic Chemicals Committee, Total Environment Centre, dated March 27, 1990, Australian Environment Movement Supports Worldwide Ban ..... 113
    Beaumont, Peter, coordinator, The Pesticides Trust, dated March 23, 1990, to Senator Patrick Leahy ..... 116
    Weir, David, author/lecturer, dated March 26, 1990, to Senator Patrick Leahy ..... 117
    Segal, Naomi, Householders for Safe Pesticide Use, dated March 25, 1990, to Senator Patrick Leahy ..... 118
    Van Pinxteren, Bert, Officer in Charge, Environment Liaison Centre (International), dated March 26, 1990, to Senator Patrick Leahy ..... 119
  Prepared statement ..... 121
  Appendix A—Organizations Supporting the Pesticide Export Reform Act of 1990 ..... 130

## ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Harman, John W., Director, Food and Agriculture Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office, prepared statement ..... 131
  Appendix I ..... 138
  Appendix II ..... 140
  Appendix III ..... 142
Food Safety and Quality, Five Countries' Efforts to Meet U.S. Requirements on Imported Produce, U.S. General Accounting Office (GAO), Report to Congressional Requesters, March 1990, GAO/RCED-90-55 ..... 148
  Executive Summary ..... 150
  Contents ..... 154
  Chapter 1—Introduction ..... 157
  Chapter 2—Foreign Governments' Efforts to Meet U.S. Safety and Quality Requirements on Exported Produce ..... 167
  Chapter 3—Private Sector Efforts in Five Foreign Countries to Meet U.S. Safety and Quality Requirements ..... 185
  Chapter 4—U.S. Agencies' Efforts to Assist Foreign Countries in Meeting U.S. Safety Requirements ..... 201
  Chapter 5—Issues for Consideration by the Congress ..... 212
  Appendixes ..... 216
  Major contributors to this report ..... 231
Prepared statements:
  U.S. Food and Drug Administration, Public Health Services, Department of Health and Human Services, Rockville, MD ..... 232
  Hathaway, Janet S., senior project attorney and Pierre R. Erville, legal intern, on behalf of the Natural Resources Defense Council (NRDC), Washington, DC ..... 235
  Stickie, Warren E., president, Chemical Producers and Distributors Association (CPDA) ..... 237
  National AgriChemical Retailers Association, Washington, DC ..... 240

Page
Letters:
  Steinhauer, Allen L., executive director, Consortium for International Crop Protection, dated March 28, 1990, to Senator Patrick Leahy ........... 243
  Nardolilli, Michael A., Spriggs & Hollingsworth, dated March 27, 1990, to Hon. Patrick Leahy, with attachments ........... 244
    Prepared statements:
      Velsicol Chemical Corporation, Rosemont, IL, with attachments... 245
      Williams, Gary M., M.D., Scarsdale, NY, statement on Hazard Assessment of Chlordane ........... 249
      Shindell, Sidney, M.D., professor and chairman of the Department of Preventive Medicine at the Medical College of Wisconsin, statement on Health Effects of Exposure to Chlordane, with attachments ........... 254
        Studies of Workers ........... 256
        Studies of Applicators ........... 258
        Mortality of Workers Employed in the Manufacture of Chlordane: An Update, by Sidney Shindell, MD, LLB, and Slack Ulrich, BSChE, Journal of Occupational Medicine/Volume 28 No. 7/July 1986 ........... 259
S. 2227, reprint of ........... 263

# PREPARATION FOR THE 1990 FARM BILL

## Circle of Poison: The Pesticide Export Reform Act of 1990—S. 2227

---

WEDNESDAY, MARCH 28, 1990

U.S. SENATE,
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
*Washington, DC.*

The committee met, pursuant to notice, at 9:33 a.m., in room SR-332, Russell Senate Office Building, the Hon. Patrick J. Leahy (chairman of the committee) presiding.

Present or submitting a statement: Senators Leahy, Conrad, Lugar, Wilson, and Gorton.

The CHAIRMAN. The committee will come to order.

We have three distinguished colleagues here. I will withhold my opening statement until after the three of you have given yours.

So, without further adieu, I see my good friend Al Gore from Tennessee. Al, I know you have a hearing of your own you are chairing right now, so I will yield to you and then to our two distinguished colleagues from the other body.

Senator Gore.

### STATEMENT OF HON. ALBERT GORE, JR., A U.S. SENATOR FROM TENNESSEE

Senator GORE. Mr. Chairman, thank you very much for your extraordinary courtesy in allowing me to present my statement, even before your opening statement.

I appreciate the indulgence of my colleagues from the House. I am proud to join them and you as a cosponsor of the Pesticide Export Reform Act of 1990.

Mr. Chairman, I have a prepared statement which I am sure, according to custom, will be placed in the record. I am just going to summarize the reasons why I think this bill is so important.

We frequently hear an old saying around the Capitol, when someone encounters an outrage and speaks up with these words, "there ought to be a law." Well, that is true of this case more than any case I can remember in a long time, there ought to be a law to prevent the export of pesticides banned for use here in the United States, so that they can be sprayed on food products that are then brought right back into the United States and put on the dinner table for Americans to consume.

It is ridiculous to pretend that we protect the health of Americans and the environment of our country by simply encouraging companies to take the same chemicals just across the border, where they can be used in the same way, and then bring the products back here.

It is wrong and it is unfair, for several reasons. First of all, this Circle of Poison, as it has been described, continues to threaten the health of American citizens. Secondly, American farmers, who are deprived of whatever competitive advantages come from using these dangerous chemicals, should not have to face unfair competition from growers across the border in other countries who are using the same chemicals that have been banned for use here in the United States. It is just plain wrong.

We live in one world, a world many of us hope will continue to be led by the United States of America, and if we are going to convince other nations in the world to follow our lead in protecting the environment and protecting the health of those who consume food products, then we have to summon the moral authority by taking actions here at home to prevent the export of dangerous chemicals to foreign countries when they have been banned here in the United States.

A lot of these foreign countries do not have a sophisticated environmental protection agency or a cadre of scientists prepared to test the health effects of a lot of these chemicals, and so it is unfair to pretend that they are going to stop their farmers from using these chemicals the way we have, because they may not have the same kinds of standards. But then, when their food comes right back here, the circle is complete and our consumers are threatened.

Now, let me say that probably the largest producer of a banned chemical used on food that is exported overseas is a company that is based in my home State. Somebody asked me, well, does that not make you reluctant to cosponsor this and join with Senator Leahy and Congressman Synar and Congressman Panetta and Senator Fowler in pushing this legislation. My response is no, of course not, it makes me interested in doing it, because Tennesseans eat these fruits and vegetables just like everybody else and we do not want to consume this poison.

The simple fact of it is that it is just plain wrong. It is really not that complicated. If it is poison and it hurts people who consume it and we ban it for use here in the United States, under what possible logic can we justify giving it to our foreign competitors and letting them do exactly the same thing and sell the food back to us. Really, it is ridiculous to allow this to continue.

So, I want to congratulate you, Mr. Chairman, for your leadership on this issue. A couple of quick examples. Chlordane, the one I was referring to a moment ago, though I did not name it, has showed up in beef imported to the United States from Honduras in concentrations eight times the allowable level, even though use was halted more than a decade ago in the United States by EPA. So, expanding FIFRA and taking the other steps necessary to impose these restrictions is imminently justified.

Velsicol Chemical Company shipped approximately 5 million pounds of chlordane and heptachlor between 1987 and the middle of last year that ended up in as many as 60 different countries. As I say, it is just plain wrong.

I congratulate you for your leadership and I really hope we can pass this legislation this year, both in the Senate and in the House. I look forward to working with you and our colleagues here toward that end.

Thank you.

[The prepared statement of Senator Gore appears at the conclusion of the hearing.]

The **Chairman**. Thank you very much, Senator Gore. I know you have the other hearing and we have your prepared statement for the record. You have been a long-term supporter of this bill, as you joined with the rest of us here at the introduction of S. 2227, and your own first-hand knowledge of the implications to your home State of Tennessee is going to be extremely important to us.

I appreciate your being here.

Senator **Gore**. Thank you again for your courtesy, Mr. Chairman.

The **Chairman**. Thank you.

We have here today, the chairman of the House Budget Committee, my good friend Congressman Leon Panetta of California. I appreciate Congressman Panetta being here. Mr. Chairman, it is all yours.

## STATEMENT OF HON. LEON E. PANETTA, A REPRESENTATIVE IN CONGRESS FROM THE 17TH CONGRESSIONAL DISTRICT, STATE OF CALIFORNIA

Mr. **Panetta**. Thank you very much, Mr. Chairman and members of the Senate Agriculture Committee.

I appreciate, first of all, your holding this hearing and focusing on the legislation that we introduced—the Pesticide Export Reform Act of 1990. I would ask that my prepared statement be made a part of the record. If I could just summarize it, I would appreciate doing so.

Mr. Chairman and members of the committee—and I note particularly Senator Wilson, who had an interest in this same legislation a few years ago, obviously, the basic problem I think was summarized by Senator Gore. It makes very little sense for us to prohibit the use of these pesticides and insecticides in this country and then allow companies to sell them to other countries for use in those nations. That is a double standard that we simply cannot continue to tolerate.

Second, the problem is that, while we institute the highest standards on our farmers and require the highest protection for our consumers, when these products make their way back into our market, we jeopardize our consumers and treat unfairly the farmers and producers who we require abide by the strict standards established in this country. So, for all of those reasons, it is important that we implement this kind of legislation.

Let me quickly refer the committee to a GAO report [1] which Congressman Horton and I had requested be done to focus on the food safety standards used by other countries. When I was chairman of the Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition, we tried to look at what other countries do to exercise some control over the use of pesticides and insecticides that may then flow back into our marketplace.

---

[1] See pp. 148-231 for the GAO report, "Food Safety and Quality—Five Countries' Efforts to Meet U.S. Requirements on Imported Produce," GAO/RCED-90-55.

As a result of those hearings we discovered that many of these countries have a very haphazard process, at best, for regulatory pesticides. When EPA sends out its regulations and requirements, its tolerance levels, these countries in many instances do not even retain that information.

In addition, we found that their approach is very much a voluntary approach. They basically issue some standards and say that some pesticides and insecticides should not be used, but, in fact, they do not have an effective enforcement mechanism in those countries to regulate compliance. It is basically left up to the farmers and to the producers to comply.

So, the consequence of all of that is that ultimately these products can flow back into our marketplace, unless they are intercepted by our FDA inspectors. At this point, FDA only inspects approximately 1 percent of the products that flow into this country. I might point out that they find double the number of violations on imported products they inspect as they do with regard to inspections within this country. This really raises some concern for the potential danger to our own consumers.

The GAO report which was just completed and which is part of your packet, was issued in March of 1990. I think this latest information basically confirms our worst suspicions. What it does is it looks at the activities of five countries, Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico. Incidentally, these countries are responsible for over half of the U.S. fruit and vegetable imports from Latin America and the Caribbean region.

According to the report, each country has basically designed its food safety and quality system to address domestic markets, not the export markets. To some extent, these governments have limited the domestic use of pesticides that are banned in the United States, but they still have permitted some 6 to 18 percent of 32 pesticides which EPA has either canceled or suspended.

In addition, the GAO has identified 110 pesticides registered for use in one or more of the five countries that do not have an EPA tolerance level established for food use in the United States. And while these may be appropriate for domestic use, any fruits and vegetables produced with these chemicals cannot be legally imported into the United States.

Government officials in all of the countries except Chile told the GAO that government monitoring and enforcement activities of pesticides, particularly residue testing and monitoring of pesticide availability, were very limited. In addition, these countries do not always remove canceled pesticides from registration lists or from the commercial channels at the time of the cancellation. As a result, there is a great deal of uncertainty regarding the effectiveness of pesticide regulation in these countries. You are essentially "rolling the dice" with regards to use of these pesticides in these countries.

The GAO reported that the Dominican Republic canceled the use of a series of pesticides during the 1970's. Yet, despite the ban on these pesticides, the chemicals registration was not listed until 1988.

This is just some of the evidence that is contained in the GAO report. As I said, I think it confirms our worst suspicions. We continue to sell illegal pesticides and insecticides to these countries, and they do not have any way of effectively enforcing requirements that we have in this country with regards to ensure that those chemicals do not flow back into this Nation on imported products. At the same time, we do not have a sufficient enforcement mechanism to be sure that those products do not enter into our marketplace.

So, it is for all of those reasons that I think this legislation is needed. In fact, it is essential. We need to outlaw the export of these pesticides to other countries and, in addition, very frankly, we need to improve our own enforcement in this country. This is essential if we are to protect consumers, but also to ensure that our farmers are treated in a fair manner, so that when they meet domestic food safety standards, they also know that other farmers in other countries are required to meet the same standards.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Panetta appears at the conclusion of the hearing.]

The CHAIRMAN. Mr. Chairman, I appreciate you being here. Your own experience on the House Agriculture Committee and involvement with these issues in all the years you have been here in the Congress are extremely valuable to us. You carry a lot of weight and I appreciate your testimony very much.

I also know that you have a markup and feel free to leave, if you must.

Mr. PANETTA. Thank you very much.

The CHAIRMAN. Congressman Synar, I appreciate you being here. As chairman of the Subcommittee on Environment, Energy, and Natural Resources of the Committee on Government Operations, you have also done the lion's share of the work on the whole export issue in the Circle of Poison legislation. I appreciate very much your willingness to take time to come here. The floor is yours.

## STATEMENT OF HON. MIKE SYNAR, A REPRESENTATIVE IN CONGRESS FROM THE THIRD CONGRESSIONAL DISTRICT, STATE OF OKLAHOMA

Mr. SYNAR. Thank you, Pat, very much. I want to also commend you, Al, Leon, Dan Glickman, and others who have helped us.

There is really no excuse for the United States to export pesticides which cannot be used at home. That is very simple; it is very logical. It is unfair to the farmers, it is unfair to the consumers and it is potentially dangerous to the public health of our citizens, not only here in this country, but citizens around the world. As you said so eloquently, we must break this Circle of Poison.

Now, not to go back over what Al and Leon both have said, but I think there are some points that I would like to emphasize. First of all, just in the last 10 years, the pesticide market has doubled and

U.S. exports have accounted for a quarter of that world's supply. But as both Al and Leon pointed out, many of these countries that are getting these exports of pesticides do not have the resources, do not have the expertise to regulate the chemicals which are shipped to them and, because of that, they are very vulnerable.

Even more importantly is that the Food and Drug Administration reports that 5 percent of all the imported products contain residues of pesticides not registered for use here, but which are imported and there are some staggering numbers. For some commodities like cabbages, the FDA found 14 percent of the imported cabbages had violations with respect to pesticides. Imported blackberries had an even greater rate of violations of 38 percent.

Now, American farmers have a right to be angry when they see that foreign producers are competing against them, using chemicals that they cannot use. American consumers have a right to be angry, since almost none of these foreign products are getting tested at the border. It will give them confidence and assurance of the quality of the product. People around the world have a right to be angry at the United States and its pesticide policy, because of the exposure of their own citizens.

Now, there will be those who will testify today that if we do not sell them these pesticides, someone else will. Well, I personally find that kind of attitude and reasoning, at a minimum, disappointing and morally disgusting. As the World Health Organization points out we, as a great nation, should be concerned about this problem.

Pesticides are responsible for 500,000 to 1,000,000 poisonings every year and it is estimated that there are 10,000 deaths around the world. Now, those problems I mentioned fall disproportionately on the developing countries who consume over one-quarter of the world's pesticides and yet suffer half of the poisoning cases and nearly three-quarters of the deaths.

Our statistics are very scattered and really cannot clearly point to how bad that problem may be.

The provisions of your bill and our companion bill are very simple: there are eight points. First of all, it would ban the exports of pesticides not registered in the United States. Second, it bars the import into the United States of food treated with pesticides that cannot be used domestically.

It would require that food tolerances for unregistered pesticides be dropped, thereby effectively blocking the importation of food treated with pesticides that farmers and growers in this country cannot use. It would require better labeling, to be written in language of the foreign country where it is intended to be used. The label must have all the information that we require here in the United States.

It would require worldwide notification, when a pesticide is newly registered, canceled, suspended or withdrawn. It would allow export of hazardous pesticides only to countries with an effective regulatory system to ensure proper pesticide use and also which agreed, before any shipments, that they would allow those pesticides to enter their borders.

It would require us to establish an international meeting on this Circle of Poison, to solve the problem and, finally, it would help the

FDA screen foreign-grown foods and imports, in order to protect our citizens.

This legislation, as Al said in his remarks, is important. There ought to be a law and, with your leadership and the leadership of Leon Panetta and the Agriculture Committee, this year will be the year that we will finally solve this Circle of Poison problem.

Thank you.

[The prepared statement of Mr. Synar appears at the conclusion of the hearing.]

The CHAIRMAN. Thank you. I hope it will be. I know that you have been pushing for this for nearly a decade, with legislation in 1983 and hearings through the years. I hope, with all of us working together, we can pass a bill and I appreciate your help.

I also note that you have a markup, too. Mike, thank you very much for coming over.

Mr. SYNAR. Thank you.

The CHAIRMAN. With your leadership in the House, I think we are going to make it.

Thank you.

Mr. SYNAR. Thank you, Mr. Chairman.

The CHAIRMAN. I would normally give my opening statement at this time, but Senator Wilson has a conflict and I will yield first to Senator Wilson of California.

## STATEMENT OF HON. PETE WILSON, A U.S. SENATOR FROM CALIFORNIA

Senator WILSON. Thank you very much, Mr. Chairman. I greatly appreciate your courtesy in deferring your opening statement to accommodate my schedule.

I also commend you for holding the hearing and for introducing this important legislation. This is literally an idea whose time has come.

In 1989, I introduced S. 1989, the Global Ban on Dangerous Pesticides Act, and there are distinct echoes in the legislation that you have introduced. In fact, they do much the same thing. S. 2227 is more detailed and it is an idea whose time has come, for three very good reasons, which you have already heard enunciated, I think quite well, by the congressional Members who have testified here today.

The first is that there is the need to protect our American consumers. Increasingly, we are importing food stuffs in a volume that makes clear that there is danger, because of the laxity, to put it mildly, of enforcement in the foreign nations which are using pesticides which we do not permit to be used in this Nation, because they are too dangerous, and then exporting the foodstuffs that have been sprayed with the same substances.

The second group, obviously, are those who in those foreign nations are endangered. If something is too dangerous, too toxic to be used in the Untied States, it is simply unethical for us to foist that upon other nations that do not have the same standards but clearly are in equal jeopardy under the standards that we have devised.

Third, it is not fair to American growers competitively, to hold them to the strict health and safety standards which properly are the test for the produce that they bring to market and, at the same time, allow an entirely different standard for those imported foodstuffs which, I repeat, are entering the United States in increasing volume.

The point that I think is worth dwelling on is one that you will recall very well, Mr. Chairman, because you were helpful at the time. I introduced a bill which was called the Safe Food Imports Act of 1987. It finally became part of the Omnibus Trade bill, which was the title of that bill, but that effort was directed at enforcement by FDA and by USDA and, very candidly, it has become clear to me and is confirmed by these latest GAO reports, that not only is there a laxity on the part of foreign nations that do not purport to have our standards, much less to enforce them, there is also a total inadequacy of response on the part of those American agencies charged with the responsibility for safeguarding the American consumer.

Now, I say that, frankly, with some concern that I not be unfair to the agencies, because I think, frankly, in the Congress we have been unwittingly unfair to them by mandating responsibilities for which we have not provided adequate resources and I am not sure that we even can. In fact, I am quite convinced that we cannot. It would probably require a 100-fold increase in the manpower now assigned by FDA to the monitoring and inspection and sampling of various imported foodstuffs. Even then, I doubt that we would catch all that is coming in.

The only way logically to deal with the problem is not to increase that manpower, that inspection force 100-fold. It is, instead, to do what is required in the first place, what is the justification for our giving tax dollars to that purpose, when more efficiently, more ethically, much more effectively, we can simply ban the export which will ultimately have the effect of banning the manufacture. We might even look to that even more direct approach. But it simply makes no sense for us to allow something that we regard as so toxic that we will not permit it to be used in the United States, to escape our boundaries and then come back in. It is not fair, first, to our consumers, it is not fair to those who will be consumers in foreign nations, it is not fair to American farmers.

I will submit my statement for the record and I thank you for your courtesy, and I do very much hope that we will not only mark up this bill, but succeed in getting it passed this year.

Thank you.

[The prepared statement of Senator Wilson follows:]

## PREPARED STATEMENT OF HON. PETE WILSON, A U.S. SENATOR FROM CALIFORNIA

Mr. Chairman, I applaud you for calling this hearing to discuss the "Circle of Poison" problem—a situation in which pesticides that are banned in the United States, yet still produced in this country, are exported to foreign countries for use on food products that are then imported back into the United States.

I found this issue to be of such vital importance that I introduced S. 1989, the "Global Ban on Dangerous Pesticides Act," on November 21, 1989.

Mr. Chairman, you have introduced the "Pesticide Export Reform Act of 1990" [S. 2227] to address the same concerns. I commend you for your efforts in this regard.

I can think of no duty the Congress performs that is more important than ensuring the health and safety of our citizenry.

Recently, the safety and wholesomeness of our Nation's food supply has come under increasing public and Federal scrutiny, especially when it comes to the proper use of pesticides on the food we grow here at home and the food we import from overseas.

Pesticide sales worldwide are increasing dramatically. From 1977 to 1987, the international agricultural chemical market doubled in size to more than $17 billion.

Between 400 and 600 million pounds of U.S. manufactured pesticides are exported by the United States each year. About a quarter of the pesticides exported are *not* registered for use in the United States.

Pesticides not registered by EPA include pesticides that have been canceled or suspended for use in the United States because they may cause cancer or otherwise endanger humans, wildlife, or the environment.

Others have been voluntarily taken off the market by manufacturers for economic considerations or concern over the potential adverse health or environmental effects.

These nonregistered pesticides are allowed to be exported because of a loophole in the Federal Insecticide, Fungicide, and Rodenticide Act—the law that governs the sale and use of pesticides.

All that is needed to export a banned pesticide is for the foreign purchaser to sign a statement acknowledging that the pesticide is not registered for use in the United States.

Mr. Chairman, if nonregistered pesticides are banned in the United States, they should not be used in any country where they may endanger the health of others.

It is wrong to protect the health of Americans, but allow dangerous pesticides to poison citizens in other countries.

There is also the added danger that unregistered pesticides exported to foreign growers will eventually get back into the food chain.

The Food and Drug Administration monitors produce imported into the United States. But only a small fraction of all shipments is tested. And tests are not sufficiently comprehensive to detect all unregistered pesticides.

The problem of unregistered pesticides showing up on food imported into the United States is particularly troublesome when considering both the escalation of pesticides used by developing countries and the escalation of their exports of produce back to the United States.

The United States currently imports more than 20 million tons of food annually—an increase of almost 45 percent from a decade ago.

According to EPA, the United States supplies approximately half of the pesticides used by Latin American countries—many which are unregistered. At the same time, increasing quantities of fruits and vegetables are being grown in these countries specifically for shipment back to the United States.

Clearly, the unfettered export of dangerous pesticides poses a public health risk of international dimensions.

Finally, in addition to health concerns, the export of pesticides banned in the United States creates a competitive inequity between foreign and American farmers and growers.

Requiring U.S. growers to use what are often more expensive pesticides, while making available to foreign competitors less expensive pesticides, puts Americans at a competitive disadvantage.

The result of this inequity is to deny our growers a level playing field on which to compete.

Mr. Chairman, I introduced the "Global Ban on Dangerous Pesticides" to protect the health of citizens of all countries, to protect American consumers, and to ensure that U.S. growers are not placed at an unfair disadvantage concerning pesticide use.

The legislation is comprised of two major initiatives:

First, exports of unregistered pesticides would not be permitted unless the Administrator of the EPA determines that there is a greater risk to the public health from not exporting the pesticide.

Second, EPA would be required, in coordination with other Federal agencies, to convene an international conference of foreign governments for the purpose of banning dangerous pesticides.

EPA would also be required to report to the Congress, within 6 months after enactment of the act, on the progress undertaken by EPA to convene this conference.

Mr. Chairman, I am aware that your legislation expands on the elements contained in my bill. I look forward to reviewing the testimony of those who are here today to discuss your legislation.

It is my hope that we can work together and make decisions—today—that will ensure a safe food supply in the next century.

With our efforts, the United States can guide the way toward a safer food supply not simply for the consumers of this country—but for consumers in every country.

## OPENING STATEMENT OF HON. PATRICK J. LEAHY, A U.S. SENATOR FROM VERMONT

The CHAIRMAN. Thank you very much, Senator Wilson. I appreciate your support and your expertise in this. I know you have to take off to another engagement also.

Over the next year, we will have many priorities before this committee.

Just so that there will be no mistake about it, there will be no greater priority than this Circle of Poison legislation, and the reasons are simple.

Every day, millions of Americans are exposed to needless risk.

In neighborhood supermarkets, they unknowingly buy food grown overseas, that has been sprayed with pesticides so dangerous that EPA refuses to let our farmers use them in the United States.

Worse yet, some of these pesticides are made right here in the United States of America. And because FDA waives through virtually all imported food without inspection, these chemicals often end up on America's dinner table.

This is the "Circle of Poison." It must be broken.

America is one of the safest food suppliers in the world. We are constantly seeking ways to make the best better.

But at at a time when we are toughening standards at home, it makes no sense to allow American companies to use a loophole in current law to dump unsafe pesticides abroad—only to have those chemicals show up in imported foods in America's supermarkets.

In my written statement there are two examples of U.S. made pesticides that are dumped overseas—pesticides that EPA considers probable carcinogens and too dangerous for domestic use.

One-fourth of the produce we eat is imported. That comes to 135 pounds of fruits and vegetables for every man, woman, and child.

Although FDA is responsible for inspecting all imported food, it only samples a minuscule 1 to 2 percent of the food entering this country. The rest is simply waived through at the wharf.

Overall, 5 percent of FDA-sampled imported food was found contaminated with illegal pesticides—5 percent. The actual violation rate may be substantially higher because FDA routinely fails to screen for scores of pesticides.

In fact, in the last 2 years, Federal inspectors have found U.S.-banned pesticides in beef from Honduras, pineapples from the Philippines, and beans and carrots from Latin America.

The GAO reported that 28 percent—more than one out of every four—FDA-sampled imported pineapple contained illegal pesticide residues.

So, if we are going to break this Circle of Poison, it means stopping the U.S. chemical companies from dumping pesticides overseas that the EPA considers unsafe. It means reducing the chance that these banned chemicals will find their way into our schoolchildren's lunch sacks.

Buying food should not be a gamble. Consumers should not have to choose between off-season cantaloupes and cancer every time they buy imported fruit at the supermarket checkout line. It is one hell of a Hobson's choice, when you stop to think about it.

Let's be clear about something else. The current system—with lax controls in other countries and spotty FDA enforcement—as the witnesses have stated already, handcuffs our farmers.

If a chemical is banned here but used by competing producers in a foreign country, then we are in effect penalizing U.S. growers and farmers for using safe pesticides and complying with the law. That's not fair, that's not right; and it must stop.

Today's hearing will focus on the Pesticide Export Reform Act of 1990 which has been introduced in the Senate as S. 2227 and in the House as H.R. 4219. It is endorsed by farm, consumer, and environmental groups. I expect this legislation will have broad support. It is not something that we can put off any more.

If you were to walk into any supermarket in this country or any store of any size and explain what the stakes are and ask the people who are buying the food in America if they support this legislation, you would get a two-part answer: First, yes, they support it. Secondly, why is it not on the books already? We are going to try to make sure it is.

[The prepared statement of Hon. Patrick J. Leahy follows:]

## PREPARED STATEMENT OF HON. PATRICK J. LEAHY, A U.S. SENATOR FROM VERMONT

Every day, millions of Americans are exposed to needless risk.

In neighborhood supermarkets, they unknowingly buy food grown overseas that has been sprayed with pesticides so dangerous that EPA refuses to let our farmers use them in the United States.

Worse yet, some of these pesticides are made by U.S. companies right here in America. And because FDA waives through virtually all imported food without inspection, these chemicals often end up on America's dinner table.

This is the "Circle of Poison." It must be broken.

America is one of the safest food suppliers in the world. We are constantly seeking ways to make the best better.

But at a time when we are toughening standards at home, it makes no sense to allow American companies to use a loophole in current law to dump unsafe pesticides abroad—only to have these chemicals show up in imported foods in America's supermarkets.

Here are just two examples of U.S.-made pesticides that are dumped overseas—pesticides that EPA considers probable carcinogens and too dangerous for domestic use:

—At its Memphis, Tennessee plant, Velsicol made and exported to 25 countries, nearly 5 million pounds of chlordane and heptachlor (1987-89). Nine years earlier, EPA halted nearly all agricultural uses of chlordane and heptachlor because industry and independent studies showed both to be carcinogenic. Velsicol declined a committee invitation to testify here today.

—Since 1983, Dow Chemical ~~U.S.A.~~ has unsuccessfully applied to EPA for registration on Gallant (haloxyfop-methyl). Although EPA considers it a Class C (possible human carcinogen) chemical, Dow exports Gallant to Chile for use on pears and apples which are then exported to the United States.

One-fourth of the produce we eat is imported. That's 135 pounds of fruits and vegetables for every man, woman and child.

Although FDA is responsible for inspecting almost all imported food, it only samples a minuscule 1-2 percent of the food entering this country. The rest is simply waived through at the wharf.

A 1986 GAO study confirmed this. For imported bananas, GAO found that FDA took only 160 samples of the 17.6 billion pounds imported the 2 previous years. For pineapples, it took only 137 samples out of 1.5 billion pounds. It is safe to say that very little has changed; in fact GAO's just released report shows we import more food, not less.

Overall, 5 percent of FDA-sampled imported food was found contaminated with illegal pesticides (where there is no domestic tolerance or which are illegal to use in the United States). The actual violation rate may be substantially higher because FDA routinely fails to screen for scores of pesticides.

In the last 2 years, Federal inspectors have found U.S.-banned pesticides in beef from Honduras, pineapples from the Philippines, and beans and carrots from Latin America.

—In February and April 1988, USDA found chlordane in beef imported from Honduras at levels three to eight times the allowable levels.

—In 1988, FDA found heptachlor on carrots, pineapples, beans, coffee and cheese.

—GAO reported that 28 percent—more than one out of every four—FDA-sampled imported pineapple contained illegal pesticide residues. For blackberries, mangos, tangerines, cabbage, and melons, 38 percent, 23 percent, 13 percent, 14 percent, and 9 percent, respectively, had illegal residues.

Breaking the Circle of Poison means stopping U.S. chemical companies from dumping pesticides overseas that EPA considers unsafe. It means reducing the chance that these banned chemicals will find their way into our schoolchildren's lunch sacks.

Buying food should not be a gamble. Consumers should not have to choose between off-season cantaloupes and cancer every time they buy imported fruit at the supermarket checkout line.

Let's be clear about something else. The current system—with lax controls in other countries and spotty FDA enforcement—handcuffs our farmers.

If a chemical is banned here but used by competing producers in a foreign country, then we are in effect penalizing U.S. growers and farmers for using safe pesticides and complying with the law. That's not fair; that's not right; and it must stop.

Today's hearing will focus on the "Pesticide Export Reform Act of 1990" which has been introduced in both the Senate (S. 2227) and the House (H.R. 4219) and is endorsed by farm, consumer and environmental groups. I expect this legislation will have broad support.

The CHAIRMAN. Before we begin with the witnesses, Senator Gorton, did you have anything you wanted to say?

Senator GORTON. No, Mr. Chairman.

The CHAIRMAN. I also have a statement by Senator Lugar which he asks be made part of the record on this piece of legislation and, without objection, it will be made part of the record.

[The prepared statement of Senator Lugar follows:]

## PREPARED STATEMENT OF HON. RICHARD G. LUGAR, A U.S. SENATOR FROM INDIANA

Mr. Chairman, I appreciate the opportunity to provide comment and question on the "Pesticide Export Reform Act of 1990," and I look forward to hearing the testimony of our expert witnesses.

Food safety has, over the past year, been elevated in the public eye as a consumer issue of prominent importance. Arguably, the United States has a major role to play concerning food safety as this issue is related to pesticide use. Such a role must certainly include both domestic and international responsibilities since the United States manufactures such a large percentage of pesticides for export. A key part of that responsibility must be founded on the notion that our pesticide export policies appropriately achieve the necessary goal of ensuring the American consumer that imported agricultural commodities comply with our own standards of safety. Likewise, we must ensure that pesticides which clearly pose serious environmental or health risks should not pose those risks elsewhere.

Realizing that many countries, especially developing countries, look to the United States for assistance and guidance, we must develop policies which take into account legitimately different circumstances and capabilities of our trading partners. We must also take into account the current and potential position of American industry.

Developing a pesticide export policy should, therefore, incorporate several considerations. Such a policy should first and foremost recognize the importance of producing a safe and affordable supply of food worldwide. Such a policy should, therefore:

—Set workable standards that are fair and address any problems while maintaining the viability and competitiveness of American businesses here and abroad;

—Recognize the autonomy of other countries and their right to make informed and independent decisions about pesticides;

—Provide technical and informational assistance to developing countries who may have critical needs for certain agricultural chemicals which are not used in the United States;

—Develop international standards which will, on balance, be more effective than unilateral standards imposed on foreign countries;
—Avoid the potential for alienating some of our trading partners by declaring their pesticide regulatory mechanisms ineffective or not up to our standards;
—Develop improved and more efficient monitoring techniques to ensure the safety of imported food, and finally;
—Recognize the ongoing efforts of the EPA to strengthen section 17 of FIFRA to ensure improved control over exported pesticides.

I look forward with interest to hearing the testimony of our witnesses. Thank you.

The CHAIRMAN. The first witness is Ms. Linda Fisher, the Assistant Administrator for Pesticides and Toxic Substances, from the U.S. Environmental Protection Agency. Ms. Fisher is no stranger to this committee. She has testified here before and we appreciate the fact that you have been willing to work with the committee staff when we requested it.

Please proceed, the floor is all yours.

## STATEMENT OF LINDA J. FISHER, ASSISTANT ADMINISTRATOR FOR PESTICIDES AND TOXIC SUBSTANCES, U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC

Ms. FISHER. Thank you, Mr. Chairman.

I appreciate the opportunity to testify before you this morning on EPA's international activities related to pesticide exports, as well as the pending legislation before your committee.

### CURRENT LAW DOES NEED STRENGTHENING

Although we do not currently support S. 2227 as introduced, we do believe that the current law does need strengthening to address growing concerns about international trade in banned and severely restricted pesticides.

As with so many environmental issues, we are finding that the ramifications of our actions with respect to pesticide regulation are increasingly important in an international context, in terms of their impact on the agricultural economy, in terms of their impact on the consumer and even on the chemical industry. Therefore, in order to adequately address international pesticide use, we must both strengthen our own domestic efforts, as well as act in conjunction with other nations.

### POLICY GOALS

There are three major goals to me of a sound international pesticide program:

First, as an importer of fruits and vegetables and other foods, the United States clearly has an interest in ensuring that these crops meet the same health and safety standards that we require for domestically produced food.

Second, as an exporter of food and fiber, we want our products to be able to compete on a level playing field.

Third, as an exporter of the chemical pesticides themselves, I believe the United States has a moral obligation to share our information and technical expertise, to help ensure that pesticides are both properly regulated and used responsibly throughout the world.

### UNILATERAL EXPORT ACTIONS CANNOT SOLVE THE PROBLEMS ASSOCIATED WITH THE MISUSE OF PESTICIDES ABROAD NOR WILL THEY NECESSARILY ENHANCE FOOD SAFETY IN THE UNITED STATES

However, just as with controlling CFC's to protect the ozone layer or dealing with climate change, unilateral export actions cannot solve the problems associated with the misuse of pesticides abroad nor will they necessarily enhance food safety in the United States. The United States needs to play a leadership role, however, in promoting food safety and responsible pesticide use worldwide.

### WE MUST WORK EFFECTIVELY WITH OTHER COUNTRIES AND OTHER INTERNATIONAL ORGANIZATIONS, IF WE ARE TO ACCOMPLISH OUR GOALS

It is also important to recognize that the United States is only one participant in the world pesticide trade, contributing approximately 25 percent of the supply of pesticides used on food. Therefore, we must work effectively with other countries and other international organizations, if we are to accomplish our goals. A comprehensive global strategy that imposes constructive obligations on exporting countries to share information and expertise, and that respects and strengthens decisionmaking in importing countries so that they can exercise a right of "Prior Informed Consent" (PIC) to pesticide imports, should be the focus of a responsible policy on international trade in pesticides. This is the aim of the EPA efforts that I would like to discuss today.

### CURRENT FIFRA REQUIREMENTS

Let me start with current law. Under section 17 of FIFRA, certain labeling requirements for exported pesticides are required and there are two distinct systems of notifications regarding those exports. One involves the export of unregistered pesticide products and the other involves significant regulatory actions that have been taken by EPA.

### EPA'S ENHANCED SECTION 17 POLICY PROPOSALS

EPA recently proposed changes in the policies it has to implement section 17. These changes were designed to enhance their effectiveness in reaching our public health and environmental protection goals. We have proposed to amend our policy regarding the labeling requirements for all exported pesticides, both registered and unregistered, and expanding our policy regarding the notification to other governments whenever significant regulatory actions are taken.

Under our new policy, we intend to send notices to foreign countries on a broader array of regulatory actions and provide those notices in a format that will be far more useful to them. Notices of health or environmental significance will be transmitted in a summary fashion. We also intend to improve management within the U.S. Government for the notification system, so that we can improve its timeliness.

In addition, we have proposed to issue a class determination regarding the confidential nature of information that is collected on pesticide exports. The country of final destination currently has been accorded confidential treatment. Under our new policy, we would change that. Such information should be provided to EPA and to FDA, without restriction, for use in targeting imported food monitoring programs.

Our new proposals are also aimed at enhancing the effectiveness of the international notifications and ensuring that countries importing American-made pesticides will receive timely and meaningful information that will assist them in their efforts to improve the regulation of pesticide chemicals.

We are also expanding our technical assistance activities, to improve the regulatory infrastructure of countries. Particular attention has been paid to those countries that are major sources of food that is imported into the United States.

We have also worked cooperatively with FAO and other international agencies, to develop and implement a series of regional workshops on pesticide regulation that we designed to enhance regulatory capacity across the board. We have entered into a memorandum of understanding with the Peace Corps and with the U.S. AID, to work with them to provide technical assistance that is designed to help countries with pest management. Initial projects undertaken by EPA and AID are planned for Central America.

## CURRENT INTERNATIONAL INITIATIVES

In 1989, the Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP) jointly adopted procedures to implement the principle of Prior Informed Consent (PIC) for trade in pesticides and industrial chemicals which have been banned or severely restricted. With U.S. support, FAO and UNEP are establishing mechanisms that will facilitate the transfer of information and effective communication of the decisions made by participating countries.

The scope of the international PIC system will be limited to those products that have been "banned or severely restricted" for health or environmental reasons. "Banned or severely restricted" pesticides include chemicals for which all or a significant number of uses are prohibited by final government action or voluntarily withdrawn from the market, for health or environmental reasons, as well as new chemicals that a government has refused to allow to be used.

Each country will submit a list of pesticides that it has either banned or severely restricted to FAO and an international list of prior actions will be developed. Participating importing countries will be asked, then, to decide whether or not they want to permit importation of pesticides on the international PIC list. To guard against misuse of the system as a trade barrier and help assure that potential risks are reduced, the decision to deny the import of a pesticide from a particular country must be accompanied by assurances that the country will neither import the same product from another source nor produce the pesticide for domestic use. Upon receipt of a refusal from an importing country, an exporting government must inform its pesticide industry of the decision and take steps under its law to prohibit the export of unwanted chemicals. The list of banned and severely restricted pesticides will be updated as countries take and announce new regulatory actions.

### LEGISLATIVE PROPOSALS

In order to facilitate full compliance with the international PIC system, section 17 of FIFRA should be amended to enable EPA to prohibit pesticide exports in certain limited circumstances. Specifically, we support amendments to prohibit exports if an importing country notifies us that it does not wish to receive shipments of a pesticide that has been banned or severely restricted in the United States. The country would also have to certify to us that it has prohibited import from any other source and is not producing the pesticide for its own domestic use.

We would continue our current, upgraded notification practices, so that importing countries would have the information they need to decide whether or not they want to receive banned or severely restricted pesticides.

We believe that this kind of PIC mechanism under FIFRA could form the basis for an enhanced, workable and responsive U.S. export policy, when combined with expanded information exchange and cooperative assistance to foreign countries that desire it.

In addition to developing and supporting the PIC system, EPA and USDA are also very actively engaged in activities sponsored by FAO and the U.N., under the Codex Alimentarius Commission, to move toward more internationally consistent standards for pesticide residues in food. These offer promise, in terms of ensuring that food products moving in international trade meet our safety standards. Total harmonization may not be possible, but a strong international standards program for food is crucial.

### CONCLUSION

Our approach to improving and strengthening export policy, quite honestly, differs in some significant ways from your legislation (S. 2227). Parts of your legislation would put EPA in the position of making risk-benefit decisions for other countries and passing judgment on their regulatory programs. These decisions are controversial when we make them in our own country. Often, they are followed by lengthy lawsuits and adjudicatory hearings. I am not convinced that we have the expertise or the knowledge that would be necessary for us to make these same controversial decisions for other countries.

Other provisions of your legislation might place an unworkable regulatory burden on EPA and could interrupt some of the legitimate export of pesticides and I am not convinced that they would necessarily provide an additional level of health protection, in terms of the safety of the U.S. food supply.

I do, however, share your belief that the United States has an obligation to our citizens, to our farmers, and to other nations to assist countries in making and implementing environmentally sound pesticide regulatory decisions.

Beginning with the adoption of export notification procedures under FIFRA in the late 1970's, the United States has been a leader in implementing responsible export policy initiatives. I believe we need to build on this past leadership to achieve meaningful progress in improving public health and environmental protection worldwide. I think we can do this best by moving ahead to strengthen FIFRA to provide for an enforceable Prior Informed Consent system, by stepping up our education and training activities in foreign countries, especially Third World countries, to improve their own pesticide regulatory programs and by working with Codex to develop a more consistent international standard-setting process throughout the world.

Mr. Chairman, I hope that we will be able to work together on legislation to reach these goals. Thank you very much.

The CHAIRMAN. Thank you, Ms. Fisher.

In your testimony you say that provisions of FIFRA governing the export of pesticides are to be strengthened and that is a constructive position. I commend you and the agency for taking it. Let me look at some of the practical applications of that position.

Let us think about the FAO scheme you mentioned in your testimony for a moment. Under FAO, if somebody is going to send a banned or unregistered pesticide to a country that does not want that pesticide, can EPA prevent its export?

Ms. FISHER. Not under current law, Mr. Chairman. In order to oblige the country's wishes, we would have to amend FIFRA.

The CHAIRMAN. In fact, if the importing country has actually banned the pesticide itself and it is still being exported to them and they came to EPA and asked for help in preventing its export to them, there is really nothing you can do?

Ms. FISHER. That is correct.

The CHAIRMAN. I have a letter that is dated September 22, 1989, and it says that the Guatemalan government refused a shipment of dinoseb last year, because it was not registered in that country. I believe Mexico also refused to accept dinoseb. Dinoseb's use was suspended in the United States, I believe, in 1986 and it was later canceled. Now, were you able to stop those shipments?

Ms. FISHER. We were able to stop those particular shipments of dinoseb to Guatemala and Mexico, because we had those particular products under a stop sale. They were subject to an indemnification proceeding that stemmed out of the suspension process in 1986 and, as part of that, we put the product under a stop sale, so the companies could not move them in trade without having EPA lift that stop sale and we refused to do it. So, on those particular products, because they were under an enforcement tool, we could prohibit their shipment.

The CHAIRMAN. But that was under an old law that allowed you to indemnify?

Ms. FISHER. That is correct.

The CHAIRMAN. Now, you no longer have that power, is that correct?

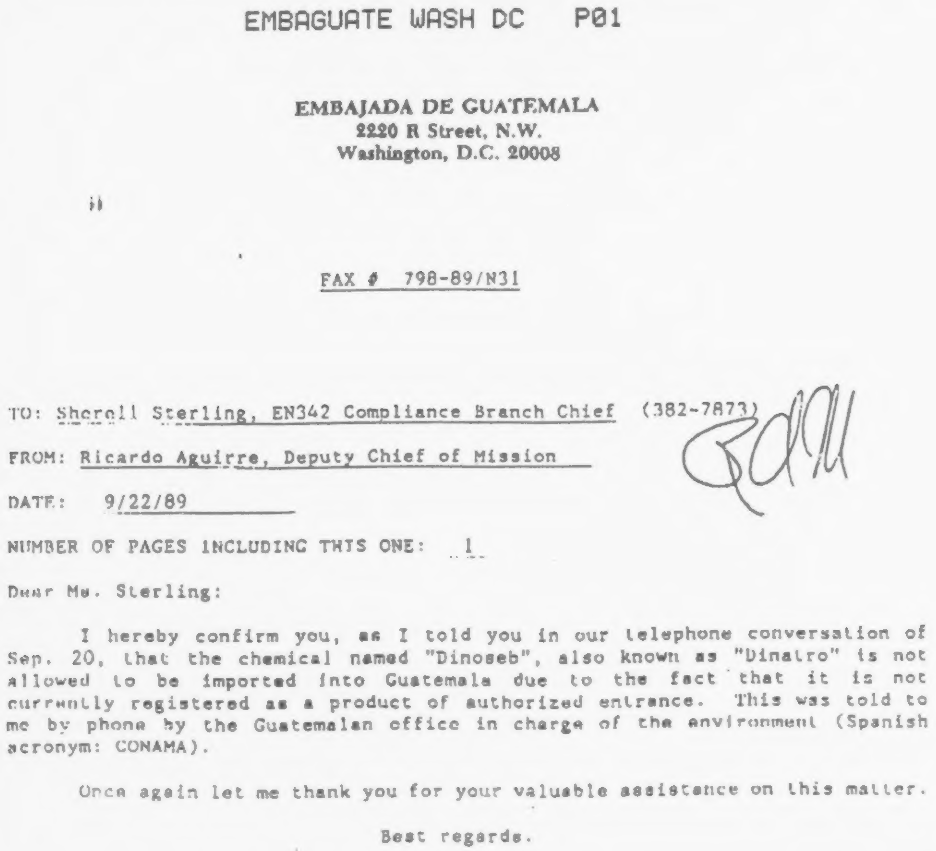
Ms. FISHER. That is correct and we do not——

The CHAIRMAN. So, if this came up today, there would not be an awful lot you could do to help?

Ms. FISHER. That is right. If a company was manufacturing dinoseb and that dinoseb was not subject to a stop sale, which it would not be if it was newly produced, we would not have any tools to restrict it from being sent to either Guatemala or Mexico.

The CHAIRMAN. Well, I will put the Guatemala correspondence in the record. I would ask you to check your files for any correspondence between EPA and Mexico on this same subject and, if you find any, to send it to us for inclusion in the record.

[The Guatemala correspondence referred to follows:]



EMBAGUATE WASH DC P01

**EMBAJADA DE GUATEMALA**
2220 R Street, N.W.
Washington, D.C. 20008

FAX # 798-89/N31

TO: Sherell Sterling, EN342 Compliance Branch Chief (382-7873)

FROM: Ricardo Aguirre, Deputy Chief of Mission

DATE: 9/22/89

NUMBER OF PAGES INCLUDING THIS ONE: 1

Dear Ms. Sterling:

I hereby confirm you, as I told you in our telephone conversation of Sep. 20, that the chemical named "Dinoseb", also known as "Dinatro" is not allowed to be imported into Guatemala due to the fact that it is not currently registered as a product of authorized entrance. This was told to me by phone by the Guatemalan office in charge of the environment (Spanish acronym: CONAMA).

Once again let me thank you for your valuable assistance on this matter.

Best regards.

The CHAIRMAN. Let me make sure I fully understand. Under the current export law, you have no authority at EPA to prevent the export of unregistered pesticides. Is that correct?

Ms. FISHER. That is correct.

The CHAIRMAN. And foreign governments are not given an opportunity to refuse a pesticide, even if it is banned for use in their country, I mean they cannot call up EPA or any U.S. Government agency and ask to stop that pesticide from heading toward our shore?

Ms. FISHER. That is correct. They can refuse it, they can ban the pesticide under their own laws and they can refuse to accept it, but we do not have any authority to assist them in enforcing their laws.

The CHAIRMAN. So, if there is a small country without a significant framework of enforcement, they could call you up and say, we understand that such-and-such a chemical has been banned, you have done all of the work on it, you know that it is unsafe, you know that it cannot be used, you have banned the chemical and a U.S. company now wants to send a shipment of a ton of the banned chemical to our country, would you please stop them. Do you have to tell that country that it is their internal matter?

Ms. FISHER. That is correct, Mr. Chairman, and that is the part of FIFRA that we think does need to be addressed.

The CHAIRMAN. If we are going to enforce the FAO code, we had better change our own laws.

Ms. FISHER. That is correct.

The CHAIRMAN. Within the last couple of months, we have heard that EPA has charged eight chemical companies for violating pesticide export regulations, with counts that include improper labels, failure to obtain acknowledgements from the foreign purchasers that pesticides were not registered for use in the United States and submitting false records. Additionally, EPA has assessed charges totaling nearly $3 million in fines.

What companies have you sued?

Ms. FISHER. Hang on for one second and I will give them to you.

The CHAIRMAN. Sure.

Ms. FISHER. We have brought action against Exxon Chemicals, Mobay, Shield Bright, Dow Chemical, Rohm and Haas, Sandoz, Monsanto, and Chevron.

The CHAIRMAN. Thank you.

Were there a number of cases where companies took the so-called "me too" procedure, that is, they had claimed that their product was similar to a registered product and, thus, should be allowed to go through, and either that claim was inaccurate or false?

Ms. FISHER. Yes, Mr. Chairman. Under our 1980 policy, we allowed companies to be exempted from some of the export notifications, if they claimed their product they were exporting was similar to one that was registered here. When we undertook our enforcement initiative, we found that in some instance companies had claimed similar to circumstance and, on further inspection, we did not believe that was an accurate finding, so a number of the counts against some of these companies are for whether or not their product should have been complying with the notification system.

The CHAIRMAN. They were trying to use the "me too" kind of loophole?

Ms. FISHER. That is correct. Under our policy that we announced in February to strengthen our export system, we put out two proposals that would try to close this loophole a little bit that companies had been taking advantage of. One option we put out for public comment was to require the companies to submit the information to us and EPA would make the determination of whether or not they were similar enough to take advantage of the exclusion.

The other one, which would be less resource intensive for us, was to require them to keep records that, on inspection, we could see whether or not the claim that they made was, in fact, a good one.

The CHAIRMAN. The problems with the "me too" kind of violations, stemmed from a reliance on the chemical companies to be forthcoming is that correct?

Ms. **Fisher**. That is correct.

The **Chairman**. Based on the charge you brought, would you say that at least some of the companies had demonstrated that relying on good-will is not enough, and we had better have both policing authority and legislative authority? Is that a fair statement?

Ms. **Fisher**. That is correct. We had not, quite honestly, as an agency, enforced under this part of the law before and the longer we went without taking enforcement actions, perhaps more sloppy some of the companies became. When we went back to inspect some of the claims, we found that in some instances companies could not even tell us what registered product they were claiming similarity to.

The **Chairman**. Well, they sure knew where the loophole was. They might not know whether it is a safe chemical or not, but they knew what was a safe loophole or at least what they thought was a safe loophole at the time.

Ms. **Fisher**. That is correct.

The **Chairman**. Thank you. Ms. Fisher, we appreciate your testimony. We may have other questions for the record, but thank you very much for being here.

Ms. **Fisher**. You are welcome.

[The prepared statement of Ms. Fisher appears at the conclusion of the hearing.]

The **Chairman**. Our next witness will be Dr. Mercedes Bolaños de Moreno, from the Ministry of Agriculture in Ecuador. She is joined by Ms. Mills.

Dr. Bolaños, it is very rare indeed that we have the honor of a witness from another country before this committee and I thank you very much for being here. Please proceed in whatever way you care to.

## STATEMENT OF MERCEDES BOLAÑOS de MORENO, Ph.D., ECUADOR

### INTRODUCTION

Dr. **Bolaños**. Good morning, Mr. Chairman and members of the committee. I would like to thank you for inviting me to present my opinions on the Pesticide Export Reform Act of 1990 and what this bill means to my country, Ecuador. In short, the act would be a direct benefit to Ecuador and in very practical terms will assist our ability to regulate the imports of these hazardous products.

### BACKGROUND ON THE STATUS OF PESTICIDE REGULATION IN ECUADOR

Let me give you some background on the status of pesticide regulation in Ecuador. The Plant Protection Program is responsible for pesticide control. In the 7 years since 1983, we have had five laws governing pesticide use. Decree No. 2331, passed in 1983, covered the regulation and monitoring of the import, distribution and use of pesticides. Under this decree, 25 pesticides were banned in 1985, including the organochlorine pesticides chlordane and heptachlor, as well as aldrin, dieldrin, endrin, BHC, camphechlor (Toxaphene), DDT, and lindane. Also other pesticides were banned.

### A NEW DECREE OVERTURNED THE 1983 DECREE

However, in 1986, a new decree overturned the 1983 Decree, and completely deregulated the import of pesticides. This meant that for the next 2 years, any pesticide could be imported with no controls. In 1988, thanks to pressure from ecological groups and associations of concerned professionals, a new decree was passed which prohibited the import of the same pesticides as before.

### IN DECEMBER 1989, YET ANOTHER DECREE WAS PASSED

In December 1989, yet another decree was passed, this time loosening import restrictions. Any farmer association or agricultural chamber can now import any pesticide whose active ingredient is registered in the Plant Protection Program.

### PESTICIDE REGISTRATION

The process of pesticide registration in the Plant Protection Program of Ecuador is simply a check to see if all the data required by the decree is present. The data for an individual product are provided by the importers and if the regulatory agency has information from another source it is simply compared. We do not have the person power or financial resources to evaluate these studies thoroughly or conduct any of our own.

The U.S. pesticide registration process is far more extensive and permits regulators to evaluate all the risks associated with a product's use. This requires extensive research about the potential health effects, as well as the behavior of the pesticide in the environment and on treated crops. This reform effort will significantly improve the amount of information on the products we will receive in the future, since it will have had to pass the full registration process in the United States. We then can have access to all the information that we do not have the capacity to produce, for lack of resources. For example, thanks to the information from EPA in 1980, we were able to prohibit DBCP in Ecuador.

### SUPPORT FOR S. 2227

With this background, how could I miss this opportunity to express my satisfaction and my vigorous support for the Pesticide Export Reform Act of 1990?

### THE CURRENT DECREE ESTABLISHES THAT IF A PESTICIDE HAS BEEN PROHIBITED IN THE COUNTRY OF ORIGIN OR IN ANY OTHER COUNTRY, WE CAN USE THIS INFORMATION TO PROHIBIT ITS USE IN ECUADOR, IF NECESSARY

I should note that the current decree establishes that if a pesticide has been prohibited in the country of origin or in any other country, we can use this information to prohibit its use in Ecuador, if necessary. To be able to take such an action, we need information. Unfortunately, we have received very few notices of changes in pesticide registrations from EPA. In fact, only eight pesticide registration changes and three for tolerance changes.

We also need information to control food residues, since maximum residue levels or tolerances have not been established in Ecuador. We use the tolerances of Codex Alimentarius or EPA-established tolerances.

### PESTICIDE COMMERCE

Under this series of laws and amendments, 639 pesticide formulations, based on 359 active ingredients, have been registered for use as commercial formulations. While we do not produce any pesticides in Ecuador, there are five formulation plants. At least 50 multinational companies operate in the country, including some of the world's largest: FMC, Du Pont, Chevron Chemical, Dow Chemical, American Cyanamid, Abbott Labs, Ciba Geigy, Sandoz, ICI, Bayer A.G., Hoechst A.G., Rhone Poulenc, Shell, Marman, BASF, Makhteshim Chemical Works Ltd., Pillar International and Pennwalt Holland.

Pesticides are imported mainly from the United States, but also from Germany, Colombia, Switzerland, the United Kingdom, Israel, Holland, China, Taiwan, France, Italy and Japan.

I have a table in my prepared statement, but I would like to give a summary of the amount of pesticides imported to Ecuador during 1989: over 15 million pounds of pesticides or formulations have been imported, equivalent to 6 million of active ingredient pounds, at $29 million.[2]

Included in the amount of herbicides is at least one that has never been registered in the United States, but is allowed to be exported from your country—the Monsanto herbicide Machete, also known as butachlor. In 1989, Ecuador imported 352,919 pounds of Machete for use on rice.

Let me show you the amount of pesticides on the extremely and highly hazardous pesticides (according to the World Health Organization's list of Ia and Ib acutely toxic pesticides) imported from the United States during 1989 and percentages of total pesticide use, to illustrate the degree of use of these hazardous pesticides. A total amount of 3 million pounds has been imported of these pesticides, 561,000 pounds of active ingredients, and for a value of $4 million.

In other words, in 1989, the United States supplied 63 percent of the highly hazardous pesticides imported into Ecuador.

### PESTICIDE POISONINGS

What about pesticide poisonings? Toxic pesticides can be imported despite the fact that Ecuador does not have a pesticide regulatory system that can determine the effects of pesticides on humans and the environment; monitor the formulation, packaging and distribution of pesticides; ensure the identity and quality of pesticides; remove from the market any pesticide found to be unsafe or ineffective; or control pesticide use according to regulatory approval. In short, Ecuador does not have an effective regulatory apparatus to control hazardous pesticides.

One example of the lack of control is that, in Ecuador, many field workers use hazardous pesticides without protective equipment. Only 5 percent of these workers use protective clothing. There is no regular monitoring to determine levels of acute and chronic poisoning and environmental contamination. Pesticide poisoning is not easily recognizable and often is treated as some other form of ailment. As a result, there is a significant underreporting of pesticide poisonings throughout the country.

---

[2] See p. 73 for the table.

I would like to describe a few examples of poisoning cases which have taken place during this year alone that I am aware of: 10 deaths from the use of methamidophos and monocrotophos in one of the provinces of Ecuador, when the pesticides were applied on tomatoes and other vegetables. At least one intoxication per week occurs these days from the application of endosulfan (Thiodan) on palm oil trees.

## PESTICIDE MISUSE

Now, let me talk briefly about problems with pesticide misuse and overuse. The very nature of the products, combined with such malpractice as applying pesticides by schedule—for instance, every 15 days—whether or not it is necessary, results in serious effects on the health of all living organisms and the environment. The harvest intervals often are not observed, so the levels of pesticide residues in some foods could be very high. In a recent study of methamidophos residues in tomatoes, 60 samples were taken in 5 local markets. We found that the residues of methamidophos were four times higher than the tolerances listed in the Codex Alimentarius.

## ENVIRONMENTAL CONTAMINATION IS WIDESPREAD

Residues in food, water and soil also is a big problem. A 1985 market basket survey found many vegetables with high levels of residues of organochlorine insecticides such as heptachlor and lindane, as well as organophosphate pesticides. An investigation of human milk that same year showed high residues of heptachlor, chlordane, lindane, aldrin and DDT. The level of heptachlor in the breast milk was four times the level permitted in cow's milk.

## PRIVATE SECTOR ALTERNATIVES TO PESTICIDES

Despite the limitations mentioned, there have been strong private sector efforts made to control pesticide use.

Integrated Pest Management (IPM), for example, is being used to control rust and weevils in coffee. For this crop, which makes up 500,000 hectares, we are using varieties naturally resistant to rust and applying cultural and biological control, the last one with a wasp introduced from Uganda. Only as a last measure, do farmers use a minimum chemical control.

IPM is becoming popular, because if we follow the technical recommendations, we would need to apply 4 liters of insecticide per hectare, or 2 billion liters of just one insecticide for just one insect. We would use 750,000 kilos of one copper-based fungicide for rust in order to control a single fungus.

## SUMMARY

To summarize many of the above points, based on my 18 years of experience within the Plant Protection Program, I can tell you that:

One, Ecuador does not have a pesticide regulatory system that can determine the effects of pesticides on humans and the environment; monitor the formulation, packaging and distribution of pesticides; ensure the identity and quality of pesticides; remove from the market any pesticide found to be unsafe or ineffective; or control pesticide use according to regulatory approval. In short, Ecuador does not have an effective regulatory apparatus to control extremely and highly hazardous pesticides.

Two, the Plant Protection Program does not have the political, technical or financial support needed to monitor pesticide use; pesticide residues in food, water, soil or air; or short and long impacts of pesticides on human and environmental health.

The government of Ecuador is not aware of the strong negative consequences to human health and the environment caused by pesticide use in Ecuador, nor has the government demonstrated the political will to investigate and implement nonchemical pest control methods or restrict pesticides to situations where their use is absolutely necessary.

Three, given our climatic, cultural and social conditions, including the actual situation of the rural population and the lack of medical and epidemiological infrastructure and environmental monitoring, the safe use of toxic pesticides in Ecuador cannot be assured.

Four, Ecuador, like many developing countries, is not in the condition to guarantee that highly toxic pesticides will be used in even a relatively safe manner.

There is a final point I feel it is important to make. The reform effort we are discussing today is an initiative of the United States to control the export of pesticides from within its borders. The Pesticide Export Reform Act of 1990 is an important expression of leadership, and I am sure that the example the United States is setting with this act will be followed and adopted by other industrialized pesticide producing countries, who will now realize that it is also in their interests to protect themselves from the residues of these pesticides.

But it is critical to note that this approach alone does not resolve the terrible problems caused by highly toxic pesticides in developing countries, and may even add to them if additional measures are not taken to stop the production of dangerous pesticide products and aggressively support alternative agricultural methods.

Permit me here to expand our challenge to include ending the production of highly hazardous pesticides everywhere, not just because the "Circle of Poison" returns them to U.S. dinner tables, but because the people of countries wherever they are used, like Ecuador, are also human beings who deserve to live and prosper in good health.

Thank you.

The CHAIRMAN. Thank you, Dr. Bolaños. I appreciate your testimony very much.

As I understand it, Ecuador usually follows the regulatory action of the United States on pesticides. In other words, if we ban a pesticide here in the United States, normally Ecuador does the same thing. I notice that you banned chlordane and heptachlor in 1985, when we did. Is that correct?

Dr. **Bolaños**. Yes, that is correct.

The **Chairman**. Why did you ban those chemicals? What were you finding in Ecuador?

Dr. **Bolaños**. Well, we banned those chemicals because, as I mentioned before, in the food market survey, we found that the food was highly contaminated with these compounds, as well as because it was found in human milk, and as well, of course, because we received information from the EPA and from an international organization, the United Nations food and agriculture organization, and from WHO.

The **Chairman**. Did you find that food production was hurt in Ecuador?

Dr. **Bolaños**. You mean when we prohibited the use of organochlorine compounds or——

The **Chairman**. When you banned those pesticides in Ecuador, did that damage food production in Ecuador?

Dr. **Bolaños**. No, I have to say that many people have been able to grow some crops without organochlorine compounds. After 6 years, I can say that we have been able to live without these chlordane compounds.

The **Chairman**. So, what happens if Ecuador was unable to receive restricted pesticides? What are the economic impacts, in your judgment?

Dr. **Bolaños**. I think this will have a significant economic impact, but if we are supplied with the required information on alternatives, we can get by without the restricted pesticides, I am very sure about that.

The **Chairman**. So, if we are going to restrict the pesticides, you want to make sure that we get you some alternatives you could use?

Dr. **Bolaños**. Yes, some alternatives, chemical or not.

The **Chairman**. Thank you.

In the bill, of course, Ecuador is not on the list of countries that would be eligible to receive restricted pesticides. Am I correct that is one of the reasons why you really have to have alternatives if this bill passes?

Dr. **Bolaños**. Yes.

The **Chairman**. Dr. Bolaños, I really appreciate you coming here. Again, I must say that it is very unusual when we have had the honor of somebody from another country to testify before this committee and I appreciate you and your translator Ms. Mills being here, although I must say, Ms. Mills, with Dr. Bolaños, it was almost unnecessary for you to be here.

Dr. **Bolaños**. Thank you.

The **Chairman**. Thank you very much.

[The prepared statement and attachments of Dr. Bolaños appear at the conclusion of the hearing.]

The **Chairman**. We will take a 10-minute recess and then come back to the next list of witnesses.

[Short recess.]

The **Chairman**. We have Mr. Frank Bouis, president of the Florida Fruit & Vegetable Association; Mr. Jay Vroom, president, National Agricultural Chemicals Associations—it is nice to see you again, Mr. Vroom—and Mr. William J. McNichol, Jr., of Ginsburg, Feldman and Bress, here in Washington. It is nice to have you here.

Mr. Bouis, we will start with you.

## STATEMENT OF FRANK S. BOUIS, PRESIDENT, FLORIDA FRUIT & VEGETABLE ASSOCIATION, ORLANDO, FL

Mr. Bouis. Mr. Chairman, I very much appreciate the opportunity of being here to testify.

### INTRODUCTION

The Florida Fruit & Vegetable Association (FFVA) is a nonprofit agricultural trade association, which is made up of producers of fruits and vegetables, citrus and perishable commodities, tropical fruits and so forth.

I, sir, am in fact a citrus grower and my occupation is trying to make a living growing citrus in central Florida. My avocation is testifying before this committee and other things, which is not to minimize the appreciation that I feel for being here.

The Chairman. And you also probably watch weather maps with a greater interest than most at this time of year, except for ski slope owners in Vermont, perhaps. You are both watching for the same thing, but with a differing degree of anticipation, I would expect.

Mr. Bouis. I agree. Personally, I lost 90 percent of my trees over the last several years due to freezes. I think that illustrates a very important fact: that the production of fruits and vegetables is a very different agricultural enterprise than the production of grains, livestock, wheat, tobacco and so forth.

The Chairman. What kind of citrus do you raise?

Mr. Bouis. I am in the orange business. Most people grow all of it, but I do not.

The Chairman. Thank you.

### SUMMARY OF POSITION

Mr. Bouis. Mr. Chairman, we are very supportive of your efforts to even the playing field for domestic producers of fruits and vegetables and other agricultural commodities. We are farmers and consumers of fruits and vegetables, and over the years we have seen more and more of the U.S. supply of fruits and vegetables being imported. We view this as disadvantageous to the consumer and to the U.S. economy. We clearly understand that imported food does not have the same food safety protection as domestically produced food. We understand that American fruit and vegetable growers are increasingly at a competitive disadvantage, compared with those abroad, and we know that, for all practical purposes, the domestic supply of fruits and vegetables has not been increasing, even though we all know that a greater proportion of fruits and vegetables in the American diet would be a healthful thing.

### GOVERNMENTAL ACTION THAT PLACES ECONOMIC BURDEN ON THE PRODUCERS OF FRUITS AND VEGETABLES

One of the issues we watch with increasing concern is governmental action that places economic burden on the producers of fruits and vegetables and which results in decreasing domestic production, other things being equal. For example, several years ago, EPA decided to eliminate the use of ethylene dibromide (EDB) on many commodities including fruits and vegetables. Eventually, all uses were prohibited in this country, but a tolerance remained for imported mangoes, which allowed foreign producers to use EDB and ship mangoes into the United States with a chemical that U.S. producers could not use. This kind of unfair competition is repeated on several other cases, as has been pointed out already this morning, and at least theoretically harms consumers who may, in fact, be consuming undesirable residues and it definitely competitively harms the American farmer.

### COMPLEX SUBJECT

Mr. Chairman, you have tangled into a very difficult and complex subject. We recognize that agricultural chemicals are essential to continuing to feed the American people in the manner to which they are accustomed and we want to make them fed even better.

We clearly recognize that some agricultural chemicals are toxic, undesirable, illegal, and we feel that using these kinds should be stamped out to the greatest possible extent.

However, neither consumers nor the Food and Drug Administration can regulate entirely the use of illegal pesticides abroad. They cannot detect all the uses of illegal pesticides. The Florida Fruit & Vegetable Association has supported Federal country-of-origin labeling legislation, without success. Country-of-origin labeling does exist at this time on processed products. If it were done on fresh products, why, the American consumer would have an opportunity to recognize when they were buying food that was produced under the safety standards of this country, which are, if not the greatest in the world, at least equal to the greatest in the world.

### S. 2227

To the extent that S. 2227 attempts to level the playing field between domestic and foreign producers when registrations of pesticide uses are canceled in this country, by providing an orderly process for revoking the tolerances for such uses and forbidding the imports of food treated with unsafe pesticides into this country, we commend and we support you.

We support providing a better system to assure that food coming into this country is as nearly safe and as nearly free of residues of pesticides as is domestically produced food.

We are also very encouraged by the bill's efforts to elicit cooperation with other countries. We think such an effort is essential to obtaining the data that we need. In fact, our association is now in negotiation with AID and is actively supporting an effort to get a cooperative group of fruit and vegetable producers of the United States and CBI countries to work toward this end. The idea is to jointly compile the existing data and develop additional needed data on fruit and vegetable production and food safety.

Mr. Chairman, over the last few years, we have seen the proliferation of legislation and regulation that has been designed to solve many problems, especially safety and environmental ones.

We think sometimes that this legislation and the regulations resulting have had some unpredictable effects on the domestic fruit and vegetable industry, effects that are really not wanted by most Americans. Last week, the Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition of the House Agriculture Committee unanimously passed an amendment to the farm bill, H.R. 3950, that recognizes this problem, recognizes the dilemma and has ordered a study of the problem. I hope that you and your committee will be supportive when it comes here.

Mr. Chairman, I am not a technician. As I said earlier, I am a grower, I am a farmer, I am a consumer. I am a man who is deeply concerned with these things that I see going on. However, Florida Fruit & Vegetable Association has on its staff experts in these fields and we will be glad to make them available to you, on your request, either in person or by telephone or by letter.

Thanks again.

[The prepared statement of Mr. Bouis appears at the conclusion of the hearing.]

The CHAIRMAN. Thank you for taking the time to be here and I do appreciate your testimony very much.

Mr. Vroom, I know that you have some strong feelings on this issue and we want to give you whatever time you need to state your position. I might say, I appreciate you taking the time and effort to be here.

## STATEMENT OF JAY J. VROOM, PRESIDENT, NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION, WASHINGTON, DC

Mr. VROOM. Thank you, Mr. Chairman.

We do have an advance written statement which we would appreciate being inserted in the record and I will proceed to summarize from here.

### INTRODUCTION

We do appreciate, on behalf of the members of the National Agricultural Chemicals Association (NACA), the opportunity to testify here today on S. 2227 and other pesticide export matters.

### WE BELIEVE THAT THERE ARE BETTER WAYS THAN THOSE PROPOSED IN S. 2227 TO ACCOMPLISH THE OBJECTIVES THAT YOU AND I BOTH AGREE UPON

We share your commitment, Mr. Chairman, to assuring appropriate regulation of pesticide exports and residues on imported food—regulations that both recognize the critical role of crop protection products worldwide and the high degree of public health and environmental protection that all of us demand and deserve. While your bill addresses many of the complex issues involved in international trade in pesticides, we believe that there are better-ways than those proposed in S. 2227 to accomplish the objectives that you and I both agree upon.

### EPA EFFORTS TO IMPROVE INFORMATION EXCHANGE

Before remarking specifically on your bill, I want to comment on the EPA efforts to improve information exchange with other governments and end-users on U.S. pesticide regulation and exports.

The FIFRA section 17 revisions that have been proposed by EPA, that Linda Fisher described earlier in great detail, mirrors many of the concerns that are addressed in your bill, we feel. We believe that satisfactory implementation of EPA's authority through regulatory reforms similar to what EPA has proposed is a better, more effective path to address these issues than new legislation. EPA just initiated its review, the comment period ends in May, and we believe that process should have a chance to work.

### CONCERNED ABOUT REPORTS OF PESTICIDES USED IMPROPERLY ABROAD

Like you, Mr. Chairman, we too are concerned about reports of pesticides used improperly abroad and public apprehension about pesticide residues on imported food. My industry has consistently supported tough measures to improve the capability of foreign governments to regulate pesticides responsibly. Effective regulation in every nation where pesticides are sold and used is the surest way to protect the world environment and human health everywhere.

### AN EXAMPLE OF NACA'S COMMITMENT

Just last year [1989], NACA hosted a group of Korean government officials who have authority for regulating and overseeing the use and manufacture of pesticides in Korea and we brought them to the United States to visit with our manufacturing people and to see how our plants operate and to visit with EPA and FDA and others involved in the regulatory process here in the United States, to try to encourage them to model some of their stewardship and safety programs after ours.

### CURRENT U.S. LAW, WHILE NOT PERFECT, STILL WORKS

Current U.S. law, while not perfect, still works. Pesticides must be registered here to be sold here. Some pesticides are not registered in the United States, for good reason. Some pesticides are made and exported for pests that do not exist here or for crops that are not grown in the United States, such as coffee, rubber, cocoa, bananas, and tea. Most U.S. exports, moreover, go to countries with regulatory standards that are comparable to our own. The absence of a U.S. registration simply does not mean that the product is untested or unregulated.

### MAZE OF REGULATIONS, RESTRICTIONS, PAPERWORK, AND DELAY IMPOSED UNDER S. 2227

The maze of regulations, restrictions, paperwork, and delay imposed under S. 2227 would likely drive most agrichemical research overseas. It would have a commensurate cost-increase impact on remaining U.S. research and production of agricultural chemicals that would ultimately be borne by U.S. farmers. A simple fact is this: If U.S. crop protection manufacturers serve a smaller U.S.-only marketplace, their costs of doing business will be amortized over a smaller customer base. That translates into higher unit costs for American farmers, potentially, and does not even begin to speak to the dislocation of a research-based industry whose innovation to this point in our history has been the envy of the entire world. We pose the question: Do we want Europe and Japan to eclipse the United States in this critical technology area?

### FULLY SUPPORT EXISTING U.S. EFFORTS

We fully support existing U.S. efforts to provide meaningful information to other countries about significant U.S. regulatory actions—principally focused upon cancellation, suspension, new registrations and tolerances, and denials for health and environmental reasons. However, we should recognize pragmatic limits on the reach of U.S. law to impose comparable limitations on use of pesticides in other countries. Other countries are equally justified and able to make their own judgments on the risks and benefits of pesticides, which may be different than our own considerations, and how those judgments are communicated to the world are also their business. We should not put our country in the position of exercising undue "environmental imperialism."

### TITLE II OF S. 2227

Regarding title II of your bill, Mr. Chairman, we share your view on the fact that all food sold in the United States—whether grown here or abroad—must meet tough U.S. tolerances for pesticide residues. This requirement is the baseline of U.S. regulation to ensure both safe food for Americans and a level playing field for U.S. farmers and their foreign competitors that wish to compete for the domestic U.S. food trade.

### CRIPPLING U.S. PESTICIDE EXPORTS WILL NOT HELP U.S. FARMERS

This last point is very important. Crippling U.S. pesticide exports will not help U.S. farmers. Foreign agricultural competitors who chose to use pesticides not registered here will still be able to get them from foreign sources—many with a much lower safety and environmental stewardship commitment in terms of those other suppliers than U.S. manufacturers provide today in world trade. U.S. agriculture's best protection against unfair competition from imported food is an effective residue monitoring program on food imports. FDA must have the level of personnel, skills and equipment necessary to continue to assure that all food sold and consumed here meets U.S. standards. Of course, we are also concerned about the loss of jobs in research and manufacturing in our industry, and that goes without saying.

### A NUMBER OF OTHER RESERVATIONS

Finally, while we have a number of other reservations, we are especially concerned about the manner in which your bill proposes to check for pesticide residues on imported food. The bill calls for food importers to identify pesticides known or customarily used by their sources. Requiring use information from thousands of importers could quickly become a trade barrier, at a time when we are trying to eliminate such barriers, and it could touch off a larger trade war, particularly when coupled with your proposed pesticide export black list of countries the United States would deem to have inadequate regulatory systems. This truly could have a detrimental effect on the nearly $40 billion of U.S. agricultural produce sold last year for export.

You may recall the adverse effect that we experienced from the EC's decision to ban beef imported from the United States that was treated with hormones and the accompanying trade ramifications and policy reverberations.

## CLOSING REMARKS

In closing, Mr. Chairman, we want to reassure you that every measure proposed in S. 2227 and related export bills deserve full airing and we support and want to participate in that debate and discussion. We have many more concerns and additional information we would like to bring to your attention, but do not have time at this point. We hope that the provisions in S. 2227 and other legislation will be evaluated in terms of what is realistically possible in ensuring responsible pesticide use abroad and whether they truly advance our collective efforts to assure the abundant, economical, and safe food supply, not only for the citizens of this country but around the world.

In closing, I might call your attention to an article that appeared in this morning's Washington Post. This article draws attention to the fact that yesterday the World Health Organization released a report that speaks to the fact that over 500 million people in the world are impacted by tropical-borne disease, much of it carried by insects that could be more effectively controlled with pesticides.

On Monday, a story that was carried in the New York Times talks about an FAO report released in Rome on Monday, that brings attention to the fact that, for the last 3 years in a row, the world has consumed more grain than it has produced. I leave you with the thought that dismantling the U.S. participation in pesticide control technology, in a way that we believe that S. 2227 would, will have an effect that may not serve to help us keep ahead of the thin line of famine in the world.

Thank you.

[The prepared statement of Mr. Vroom appears at the conclusion of the hearing.]

The CHAIRMAN. Thank you.

One might point out concerning the production of grain, that we faced 2½ years of virtually unprecedented drought here in the United States and much of the grain production fell as a result. That is one of the reasons why we have a reserve that we always maintain and nothing in this bill would stop our ability to continue to produce the grain at a greater and more effective rate than any other country in the world.

Please go ahead, Mr. McNichol.

## STATEMENT OF WILLIAM J. McNICHOL, JR., MEMBER, BOARD OF DIRECTORS, NATIONAL COALITION AGAINST THE MISUSE OF PESTICIDES, WASHINGTON, DC

Mr. McNichol. Before I step into my role as a witness, I would like to be a messenger for just a moment, and pass on to you three letters from three environmental organizations, one from Australia, one from the United Kingdom and the other from Kenya, expressing the support of these organizations, the Environment Liaison Center, the Total Environment Center and The Pesticides Trust, for the Pesticide Export Reform Act of 1990. They are addressed to you, so after you are finished——

The Chairman. I will make sure they are also included in the record.

Mr. McNichol. I expect that you will be receiving many more such letters in the weeks and months ahead.

The Chairman. Thank you.

[The letters referred to appear at the conclusion of the hearing.]

### STRONGLY SUPPORT THE PESTICIDE EXPORT REFORM ACT OF 1990

Mr. McNichol. With that done, let me try to explain to you briefly why a broad coalition of environmental, consumer, agricultural and even religious organizations strongly support the Pesticide Export Reform Act of 1990.

### THIS COUNTRY REALLY DOES EXPORT BANNED AND SEVERELY RESTRICTED PESTICIDES

It comes down to this: Senator, your bill accepts and understands realities and acts on them in a responsible manner. The realities that your bill acknowledges and accepts include the fact that this country really does export banned and severely restricted pesticides. Mr. Vroom has suggested in his written statement, though not orally this morning, that he knows of no members of his organization that indulge in such practices.

Of course, the very first person who spoke to you this morning, the Senator from Tennessee, called your attention to practices of the Velsicol Chemical Corporation, which exports hundreds of thousands of pounds of chlordane and heptachlor from this country every year, and those are the quintessential severely restricted pesticides.

### THESE PESTICIDES REALLY DO COME BACK TO THE UNITED STATES IN IMPORTED FOOD

These pesticides really do come back to the United States in imported food. That is a reality that we have to face and to deal with, and the bill deals with that. It also accepts the reality that the FDA and the USDA, our border inspection services, cannot stand guard effectively against the return of these pesticides. As Congressman Panetta pointed out, even a hundred-fold increase would not do the job.

### EPA HAS NOT BEEN RESPONSIBLE

The bill also accepts the very sad reality that the EPA has not been responsible in enforcing the existing export provisions of section 17 and, frankly, it is not realistic to expect that they are going to do any better in the future, unless specific legislative direction is provided.

For the 10 or more years that section 17 has been on the books, EPA simply has not enforced the notification requirements that are already in the law. This was made clear after Rep. Synar's investigation, which explored the matter extensively, and even after all that was done, it took them almost a year before they issued a statement in the Federal Register acknowledging that their practices for many, many years had been contrary to law and promised to do better.

I acknowledge Assistant Administrator Fisher's sincere good intentions, but the truth is that her agency has an institutional reluctance to meet its responsibilities in this area.

In 1982, the agency published a notice in the Federal Register, saying that when all the agricultural uses of a pesticide are canceled or when all the uses on a specific food are canceled, that it made sense to cancel all the food tolerances for that pesticide on that food or on all foods, as the case may be, an that was the practice it was going to follow. Eight years have passed and nothing has happened. That is why, when heptachlor was banned for use on food in this country, it took the agency 6 years to propose to revoke the heptachlor tolerances and 5 years more to act on its own proposal. This is not an agency that can issue a Federal Register notice this February promising to do better and make us feel better so that we should all go home.

### PIC PROGRAM

I also listened to Assistant Administrator Fisher's comments this morning concerning the PIC program and, frankly, I am appalled at the suggestion she made. She is in favor of the PIC program, as long as the country of import certifies that it will not buy the pesticides from anybody else and that they will not make it themselves. The thrust of that is that we are in favor of a PIC program, as long as, if there is money to be made, we get a shot at making the money. That just misses the point.

The point here is not money. The point here is the safety of our food supply, the global food supply that we all share more and more every year. It is the safety of the people in the United States who eat food imported from other countries. It is the safety of production workers here and the safety of workers who apply pesticides here and in other countries.

### ARGUMENTS CONCERNING ECONOMICS OF PESTICIDE EXPORTS

Mr. Vroom makes a great deal of arguments concerning economics of pesticide exports. Not to say that money never matters—we all cash our paychecks every few weeks—but that is not the whole story.

There are some things you just do not do for money. That is why this country will not export drugs and medical devices to countries that do not have effective regulatory programs to govern the use of drugs and medical devices. We do not export nuclear materials to countries that cannot guard against their misuse. We do not export computers and computer software to certain countries for various national security reasons. It is not just money that counts, and in this case it is the health and safety of everyone who eats from the global food basket that counts.

### S. 2227 IS NOT ACTING UNILATERALLY OR GOING ALONE

One last thing. People have said that we should not go forward, because acting unilaterally is the wrong way to go. Well, that is just the wrong way to categorize it. S. 2227 is not acting unilaterally or going alone. It gives leadership, and that is what I have always thought my country should provide, both internally and externally, and I think that is what we all want to do.

### S. 2227 USED AS A MODEL PESTICIDE CONTROL ACT

I am happy to be able to report to you today that, just a few weeks after S. 2227 was introduced, it is already being used as a model pesticide export control act by environmental groups and government agencies around the world.

### COMMENDED FOR THE LEADERSHIP

You are to be commended for the leadership that you have provided, as are the other sponsors of S. 2227 and the corresponding House bill. I hope that you and the other members of the committee will act favorably on the bill.

Thank you.

[The prepared statement and appendix A of Mr. McNichol appear at the conclusion of the hearing.]

The CHAIRMAN. Thank you very much.

I appreciate both your strong support and your comments. President Bush said that he wants to ban the export of such things as ether to drug-producing countries, because it is used in the production of cocaine. The President understands, as we all do, that those countries can import ether from others. However, President Bush feels that the United States ought to at least set a moral standard. I applaud the President for that and I agree with him.

Mr. Bouis, one of the good things about having you here is your agricultural experience. My involvement in the area of agriculture is limited to a small tree farm in Vermont. I can walk out every few months, look out the frontdoor and say, "Yup, they're still growing," and that is about as much work as I have to do. When I harvest those trees, it is usually for a small domestic market in Vermont and it is something that is fun for me and my family and we keep our piece of property looking good and all, but we do not have to make a living out of it. In fact, I always look with great eagerness to see just how much I have lost in the past year.

I sometimes think of the farmer who, when asked what he would do if he won the $5 million lottery, said that he just loved farming so much, he would just keep right on farming until the money was all used up. [Laughter.]

In your case, you speak as one who has to pay a workforce and pay the bills, the mortgages, bank notes, electricity, fuel, equipment and everything else. You also have to meet our U.S. safety standards, both those of the Federal Government and those of the State of Florida.

Do you feel it is very fair, however, that you have to compete against a lot of other countries that do not have to meet those kinds of standards?

Mr. BOUIS. Absolutely not!

The CHAIRMAN. Do you think that, at least in this area, with some of the import-export provisions we have, we may level that playing field just a tad?

Mr. BOUIS. Yes, sir, without question. We feel strongly, very strongly that the foreign producers should have to follow the same rules and provisions that we have to, both as an economic issue and as a food safety issue.

The CHAIRMAN. Mr. Vroom, let me ask you this: Do we do this because we all want to be fair, or we all want to be responsible, or do we put some teeth in it?

I spent a number of years as a prosecutor and the milk of human kindness flows through my veins and I expect always the best of everybody, but I realized, after 8 years as a prosecutor, that that is not always so. Sometimes it is nice to have a law, too. And we have heard over and over that the U.S. firms will act responsibly, but other companies are causing the problem.

Now, Ms. Fisher talked about the violations and the charges being brought. For the most part, the companies she listed are not fly-by-night companies. These are among the top in the Fortune 500 companies in this country. Does that really indicate that we can rely just on voluntary conformance to standards everybody has testified they want followed?

Mr. VROOM. I would be happy to respond to that question. Let me first point out that I believe that I am here speaking in something less than the abstract and from a concrete standpoint also——

The CHAIRMAN. I understand.

Mr. VROOM [continuing]. I would also like to let you know that I too am involved in my family farming operation back in Illinois. I enjoy those same kinds of financial losses as you referred that you do and payments to the Federal land bank, as well. My industry certainly represents significant employment contribution, we pay a lot of taxes to this country and I think that it is a lot less than abstract, as well, and we believe that this country deserves to continue to afford its industry, the agricultural industry and the input suppliers to farmers a level playing field and ensure the safety of our food supply.

But to the specific of your question regarding the export violations, there are eight companies that have been cited so far. Ms. Fisher tells me that there are something like 26 companies that were inspected, following her appearance at Congressman Synar's hearing last year, and that there probably are some other violations to be announced and some, she assures me, that were found to be absolutely without any violation citation.

Those are all proposed citations and they have not yet been proven to be, in point of fact, accurate and some of those companies that we have consulted with so far have presented evidence to the fact that some of the inspectors did a very shoddy job, did not ask for the evidence that they were really then turning around and citing the companies for being in violation of, in terms of label performance on multilingual types of labeling on the exports in question.

I really cannot speak to the specifics, because those are pending violation actions with regard to the specific companies and specific labels. But I will assure you that our industry is committed to abide by the law of the United States, we certainly have no interest in trying to sneak around the law and we are citizens of this country and certainly respect the laws that you and the other Members of this Congress pass and we will abide by the laws that you pass in the future, as well.

I might also speak to the point of whether or not Velsicol is a member of my association. They are not. I do not defend their export of heptachlor and chlordane. It is legal at this point in time. I think it is an issue that you really are justified in examining in this hearing and there are other places that EPA ought to further examine this issue.

The CHAIRMAN. If we pass this bill, it will no longer be legal.

Mr. VROOM. That is true.

The CHAIRMAN. It would solve that problem there. I understand that violations charged are not violations proven and——

Mr. VROOM. That is true.

The CHAIRMAN [continuing]. And I will make sure that is on the record. What I am concerned about is that in a list of over 900 alleged violations there is information that says a product was similar to a registered product. That concerns me, because that would be a kind of technical aspect.

Mr. VROOM. In the situations that I have had a chance to look at the data on, the "similar to" exemptions are very well supported by all the technical and legal information and it is just a call on the part of the regulator and the individual inspector who is on the scene at the time, as to whether or not he had that evidence or not and those proceedings are going to take months to be resolved.

The CHAIRMAN. I understand.

We also have the FAO Code of Conduct, which would require self-policing by the industry. For example, I have a photo of a package of Benlate that was sent to Papua, New Guinea. Benlate is a trade name for du Pont's fungicide benomyl. It is manufactured, I believe, in Belle, West Virginia. [See pp. 84–86.]

Now, the EPA considers benomyl to be a possible human carcinogen and mutagen and the packaging on the pesticide does violate the FAO International Code of conduct. It merely states a list of some of their other products. It does not talk about the problems associated with benomyl.

I mention this, because I am concerned about your feelings on the ability of the industry to self-police itself, to follow the FAO Code.

Mr. VROOM. No, I am not familiar with that particular incident. I would be happy to visit with you and your staff about that and meet with representatives of du Pont to facilitate or resolve that particular question. There may be a number of answers as to what happened there, not the least of which might have been that the du Pont Company may not have been the exporter of that particular product from the United States.

The CHAIRMAN. Now, you talk about the lost business or competition from other companies. Some of the material we received states that this legislation would affect about one-tenth of 1 percent of jobs in the chemical industry. Do you have a different figure?

Mr. VROOM. I really cannot respond to that, except for the fact that our industry and the agricultural segment of the entire U.S. chemical industry is about $4 to $5 billion in sales and the entire U.S. chemical industry is upwards of $150 billion in sales. We are a very small fraction of that industry, in total, and I really have not analyzed even the raw employment figures or projections and impacts, because that was not the case upon which we wanted to come here and explain our concerns about the legislation with you today.

We certainly are concerned about the ramifications of business impact and employment in our industry, but we think, more importantly, is the long-term prospect of the United States creating a disincentive for global companies to continue to do research and manufacture products here in the United States and that we believe is the real threatening aspect of your legislation to the viability of U.S. agriculture continuing to be on the leading edge and a technology leader in the world.

The CHAIRMAN. I take issue with that, because we have in the United States a reputation for the safest food in the world. I can tell you that many Congressmen and Senators are asked by their constituencies about the safety of our food. They are concerned about what is added to it, whether it is domestically produced or imported. People are very, very concerned.

They have gone in the past on the assumption that the United States has very strict controls about what goes on in growing and processing our food and very strict controls about what can be sold. Now they are beginning to question these assumptions; and they question them even more on imported foods. The point of the whole legislation is that if we are not going to allow these chemicals on our food here, why allow it elsewhere, especially since a lot of that food may come back to the United States.

Dr. Bolaños testified earlier today that, in her experience, if something is banned, then there is an effort made to find a safer alternative. A ban does not preclude the production of food, it does not preclude the growing of crops here, nor does it preclude the companies themselves in their efforts to come up with those alternatives. We have had chemicals banned before in the United States and then we search for an alternative. Is that not correct?

Mr. VROOM. That is exactly correct. At the same time, there are other countries in the world that have other benefit considerations to weigh against the risks and costs associated with the control of pests and I think, to come back to a well-known example, DDT still is a widely used pesticide throughout the rest of the world, much of the rest of the world, despite the fact that it has been banned here in the United States for some time and has not been manufactured here in the United States for some time.

The CHAIRMAN. But we do have an exemption in the bill so that pesticides can be exported for particular public health needs.

Mr. VROOM. Yes, but the point is that we have ceased the manufacture of this product here in the United States, and yet it has continued to save millions of lives from malaria, thanks to mosquito control, in Southeast Asia and in Africa since the time that it was ceased to be used in the United States, and it is an issue with regard to its detection on imported food.

The CHAIRMAN. Mr. McNichol, I am wondering, what effect it is going to have if tolerances are automatically revoked when a pesticide is canceled? You mentioned in your testimony EPA's policy to drop tolerances when a pesticide is canceled.

Mr. MCNICHOL. Well, Senator, it is EPA's policy but it is not EPA's practice. That is a distinction that should be made clear right from the top. I think one of the best ideas that is embodied in your bill is that it removes, to a large extent, this question from agency discretion and requires EPA to essentially conform to the policy statement that it announced in 1982.

That said, the net effect of doing this is multiple.

First, it does provide additional protection for our food supply. It makes it clear that when you buy food in the United States, whether it is grown here or grown elsewhere, it does not include pesticides that cannot be used on food in the United States. That is an important consideration in making sure that Americans have a justified confidence in the safety of our food supply.

Another important point is that it ends the practice of leaving the American food market open to growers in other countries who use pesticides that cannot be used here on our crops. Because, once you close the American market, foreign producers using these pesticides face an enormous disincentive for them to use them in the first place. Everybody wants to be able to sell their products in the United States. That applies, whether you are making VCR's or cars or you are selling food and grain.

So, this is a very important part of the bill, because it helps to enforce the leadership that we are providing. We are not going it alone. These people will be encouraged to turn away from using these pesticides, even if they could buy it from some offshore producer in a small country, with no regulations at all concerning the production of pesticides.

The CHAIRMAN. Mr. Vroom, here in the United States, most of the American firms gear their research toward U.S. agriculture, do they not?

Mr. VROOM. That would be a predominant focus, but there is substantial research of products for use outside the United States for some products that would be used here and on crops outside the United States and for crops that are simply not grown here, and those are important markets that we continue to develop new and better products to try to serve, based on U.S. based discovery research and chemistry work. It is mostly headquartered here, because we have the best science knowledge base and the best academic system to turn out the scientists that can staff those research chemistry benches in the world.

The CHAIRMAN. I agree that we do have the best scientists. I also agree that we have the best research. In many ways—this is an area that you and I may disagree on—that is part of the genesis of my Circle of Poison legislation.

We, all of us in the United States, can stand for the safest food and the safest practice. Our own citizens and other countries can look at us, knowing that is so, if we really dedicate ourselves to it. You will find many countries are perfectly willing to follow our lead, if they are convinced that we have done everything possible to make food safe for our own people.

Other countries may not have the research funds, they may not have the corporate background or governmental background to do the kind of research that we might. They could very well feel comfortable in accepting what we have done, if we establish the credibility. In many ways, credibility, by itself could substantially improve our own export market, not only in agriculture produce but in the chemicals that may go with them.

I must say, as a father of three, I want to know that my children are getting the safest food possible and I want to know that their food is safe, whether the food is grown here in the United States or grown outside the United States. I do not feel convinced that I can say that to my own family when I go out to shop, and if I cannot say it, I am not sure everybody else can.

Certainly when I see the reports from FDA and EPA, and others, about the amount of imported food that comes in here with residues of chemicals that we would not allow, I have to get concerned with where those chemicals come from. If I find that a lot of them come from the United States, then I want to see that stopped. I am not naive enough to think that if we stop the dangerous use of chemicals here, no country will ever use chemicals that we would not allow in this country.

But I would note this: If we have very strict controls on what can be imported, what residues will be allowed, what the tolerances are, I question if any country that finds the United States a significant market for their goods is going to risk having those goods banned by the United States afterward.

I thank you all for being here. Each of you will get a copy of your testimony. If any one of you would like to clarify something that you said or if you would like to add anything or if you feel there is something that I have overlooked we will keep the record open and give you that opportunity to do so.

Thank you very much. The committee will stand in recess.

[Whereupon, at 11:48 a.m., the committee adjourned, subject to call of the Chair.]

[Material submitted for inclusion in the record follows:]

# APPENDIX

---

## Prepared Statement of Hon. Albert Gore, Jr., a U.S. Senator From Tennessee

Mr. Chairman, we should enact this important legislation for two basic reasons. First, it is unconscionable for us to allow pesticides found to be too dangerous to be used in this country, to simply be shipped to other nations exposing them to the very same risks we ourselves are unwilling to accept. And second, it is ludicrous that we ban a chemical for use here in the United States, but then allow it to be exported to another country where it can be applied to crops and possibly end up back in this country, as residues on foods we import. This "Circle of Poison" must be broken.

This issue is really quite simple. We are in the middle of an extraordinary movement toward global cooperation. I have joined others in pushing the United States to be the world's leader in solving environmental problems. It is essential, if we are to have any credibility at all in that role, that we stop the export of banned pesticides. If not, each shipment will carry a message of ill-will threatening progress on many environmental fronts.

It is absolutely unacceptable that the United States, a leader in environmentally sound practices, allows its companies to produce and export pesticides that have been identified as causing horrible health complications to people who have been exposed to the products. Furthermore, countries using U.S. pesticides could easily be using the chemicals to treat food that may eventually be imported to the United States. For example, although most agricultural uses of chlordane in the United States were halted more than a decade ago by EPA, just 2 years ago chlordane levels as high as eight times the allowable level were found in beef imported to the United States from Honduras.

This legislation will expand FIFRA to ensure that companies exporting chemicals produced in the United States cannot just dump on other countries harmful substances that are unacceptable here. The bill will grant greater control to importing countries over what pesticides are entering their borders and impacting the lives of their people. And it will make legal what is already logical and sound: insecticides and other chemicals that are not registered in this country for food uses cannot be exported to other countries for food uses.

Mr. Chairman, during discussion of this bill we will be asked about the impact of this bill on companies which produce the banned chemicals. Well, I am very familiar with this concern. At the center of this debate unfortunately is a Tennessee company, Velsicol Chemical Corporation in Memphis. Velsicol Chemical is the only producer in the world of chlordane and heptachlor, two of the most highly toxic and persistent insecticides ever made. These two chemicals have been banned or severely restricted in this country for more than a decade because of the risks their usage causes to public health and the environment. But between 1987 and mid-1989, Velsicol shipped approximately 5 million pounds of chlordane and heptachlor that ended up in as many as 60 countries, many lacking the most basic regulatory systems to protect their citizens.

Not only are the use of these products harmful, but disposal of wastes from their production have damaged the health of many residents in my home State of Tennessee. Disposal grounds that Velsicol have used for chemical dumping have resulted in three "Superfund" sites in the United States requiring Federal funds for cleanup.

Yes, the jobs are important to my home State. But the health of millions of people is at risk. Velsicol is welcome in Memphis. I want the company to stay, but to manufacture alternative products and not chemicals that are unsafe.

In 1947, Congress identified a need to protect people in this country from dangerous, and sometimes deadly, agricultural chemicals. The Federal Insecticide, Fungicide, and Rodenticide Act bans certain chemicals from being used in the United States. Forty-three years later, in a seemingly shrinking world, it is time we pay more attention to the unique hazards these chemicals can pose.

Every day, we are pressing countries throughout the world to make sacrifices to assure the preservation of our environment. It is crucial that the United States exert leadership in this arena. While pesticides are useful to food producers in protecting their crops, we have wisely chosen to make certain these uses are compatible with maintaining good human health and protection of the environment. We have a responsibility to see to it that these standards are upheld not just within our borders but around the world.

I urge the committee to support this measure and look forward to the enactment of this long overdue change in our pesticide laws.

Thank you.

# STATEMENT OF THE
# HON. LEON E. PANETTA
# REGARDING S. 2227,
# THE PESTICIDE EXPORT REFORM ACT OF 1990
# BEFORE THE
# COMMITTEE ON AGRICULTURE
# U.S. SENATE

**March 28, 1990**

Mr. Chairman and Members of the Committee, I am pleased to have the opportunity to join my Colleagues, Senator Gore and Congressman Synar, in appearing before you today to address the issue of pesticide exports.

As you know, Senator Leahy, I share your concern about the continued export to other parts of the globe of pesticides which can no longer be legally used in the United States. Many chemicals which are banned in this country are still being shipped overseas, or south of the border, for use by agricultural producers in other lands. These same producers may in turn use these chemicals on produce that they export back to the United States.

Allowing this to continue is a ridiculous policy for a number of reasons.

First, in some cases the registrations of these chemicals have been cancelled or withdrawn or their tolerances suspended because of public health and safety concerns. If we are concerned about the health of Americans, shouldn't we be equally concerned about the safety of farm workers and consumers who may be exposed to these chemicals in other parts of the world?

Second, despite efforts by the governments of other nations and by grower groups to police the use of these dangerous chemicals, the fact is that they continue to be used. And, as a result, they can find their way back into the United States as residues on the fruits and vegetables we import. While I have worked long and hard to strengthen our efforts to monitor the pesticide residues on imported produce, we all recognize that FDA -- which is responsible for this effort -- is ill-prepared to deal with the problem of monitoring the mountain of imports we receive. Wouldn't it make more sense to stop sending these chemicals overseas than to invest millions of dollars each year in trying to catch them when they return?

Third, we in the U.S., and especially in California, make our fruit and vegetable growers meet the highest standards of quality and safety when it comes to pesticide use. It's unfair to our growers and the produce industry as a whole to effectively exempt producers in other countries -- countries that already benefit from cheap labor and longer growing seasons -- from the standards for pesticide use that our own producers must meet. Restricting the export of these chemicals will address this long-standing inequity.

Finally, as Chairman of the House Budget Committee, I would be remiss if I failed to address some of the cost considerations associated with continuing the status quo and permitting unrestricted export of these restricted chemicals. Several U.S. agencies -- EPA, FDA, USDA, and AID -- and a number of U.N. organizations are engaged in providing assistance to developing countries related to pesticide use. These entities spend millions of dollars each year in trying to educate growers in other countries to the restrictions on pesticide imports into the United States. It seems ludicrous to continue to permit the export of these chemicals, at considerable profit to the chemical industry, and then have to send agency personnel overseas, at considerable cost to the taxpayer, to explain to foreign growers that they can't use these same chemicals on produce bound for the U.S. If all else fails, Mr. Chairman, we might consider taxing the chemical companies for a share of their export profits to cover the cost of this overseas assistance.

For these reasons, I have joined my House colleagues, Congressmen Synar and Glickman, in sponsoring H.R. 4219, the companion to S. 2227, the Pesticide Export Reform Act of 1990, which we are addressing here today.

## Findings of the GAO Study of Produce Imports

Mr. Chairman, if I may, I would like to take the opportunity today to highlight the findings of a report that the General Accounting Office has just completed for Congressman Horton and me regarding the quality and safety of imported produce.

The report focused on the activities of five countries -- Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico -- which are responsible for over half of the fruit and vegetable imports from Latin America and the Carribean region.

According to the report, each country has designed its food safety and quality system to address domestic markets. To some extent, these governments have limited the use of pesticides banned in the U.S. But as of October 25, 1988, the five governments still permitted the use of from 6 to 18 percent of 52 pesticides whose registrations EPA had canceled or suspended.

In addition, GAO identified 110 pesticides registered for use in one or more of the five countires that do not have EPA tolerances established for food use in the United States. While these may be appropriate for domestic use, any fruits and vegetables produced with these chemicals cannot be exported to the U.S.

Government officials in all of the countries, except Chile, told GAO that government monitoring and enforcement activities for pesticides, particularly residue testing and monitoring of pesticide availability, were limited. In addition, these countries do not always remove canceled pesticides from registration lists or from commercial channels at the time of cancellation. The result is a considerable degree of uncertainty in the effectiveness of pesticide regulation in these countries.

For example, GAO reported that the Dominican Republic canceled a series of pesticides during the 1970's, including 2,4,5-T. Despite the ban on the distribution and sale of "T", the chemicals' registration was still listed in 1988.

In part as a result of limited government resources, the extent to which export market requirements are considered by growers is a function of the interest and ability of individual producers, grower groups, and multinational firms to ascertain what restrictions apply to the use of pesticides on produce destined for the U.S. and to structure programs to manage and monitor pesticide use. This results in a situation which requires agricultural interests to police themselves with regard to pesticide use, since government resources are inadequate to assure compliance with pesticide requirements for both domestic and exported produce.

The efforts and effectiveness of growers in understanding and limiting the use of chemicals banned in the U.S. on produce for export varied considerably. Costa Rica, the Dominican Republic, and Guatemala were the least able to obtain the information and provide the guidance necessary to assure that these chemicals would not be used on produce bound for the U.S.

U.S. programs in EPA, USDA, and AID are designed to improve information and technology transfer to these countries to help them understand U.S. pesticide restrictions and promote their agricultural trade. Of course, the irony is that we are funding competition for U.S. produce markets by subsidizing competing growers in other parts of the world.

Mr. Chairman, I would conclude as a result of the GAO's findings that there are two ways to ensure that chemicals banned from food uses in the U.S. do not enter our marketplace on imported produce. First, we can beef up our efforts to monitor pesticide residues on imported produce. While this is an essential element of our food safety system, history has shown that the resources available to FDA for pesticide monitoring fall far short of what is needed to do the job.

There is, however, a simpler and more cost-effective way to limit the likelihood of pesticides banned from use in the U.S. showing up on imported produce. That would be simply to put a halt to the export of these chemicals from the United States, and thus overcome the shortcomings associated with the pesticide regulatory, testing, and monitoring programs of other nations that GAO has identified in its report.

# # #

MARCH 28, 1990

STATEMENT OF CONGRESSMAN MIKE SYNAR
BEFORE THE SENATE COMMITTEE ON AGRICULTURE, NUTRITION,
AND FORESTRY CONCERNING THE PESTICIDE EXPORT CONTROL ACT

I am pleased to have the opportunity to testify before the Senate Agriculture Committee this morning on the subject of the Pesticide Export Reform Act.

There is no excuse for the United States to export pesticides which can't be used at home. It's unfair to America's farmers and consumers and it is potentially dangerous to the public health and environment of countries which receive these products. We must break the circle of poison.

This bill is long overdue. Last May I held a hearing in my Environment, Energy and Natural Resources Subcommittee on the uncontrolled export of unregistered pesticides. The 1978 amendments to FIFRA require that foreign governments receive information about exports of pesticides which can't be used in the United States. Yet, according to a G.A.O. report released at the hearing, because of loopholes in the law, foreign governments were not being notified of 90% of the unregistered pesticides exported from this country.

In the last ten years the global pesticide market doubled and U.S. exports accounted for one quarter of the world's supply. But many importing countries don't have the resources or expertise to regulate the chemicals that they are shipped.

According to a United Nations survey of 115 countries which I released at my hearing, many nations, especially in the third world, lacked the ability to assure safe pesticide practices. These practices may be a threat to the health of farmworkers and the environment in those foreign countries. Unfortunately, they may also be a threat to American consumers when foods containing residues of banned products are imported back to the United States. Other G.A.O. and congressional investigations show that high rates of violations commonly occur.

Even with a flawed inspection system, the Food and Drug Administration (FDA) reports that 5% of imported products contain residues of pesticides not registered for that use here. For some commodities like cabbages, the FDA has found 14% of imports had violations. Imported blackberries had an even greater rate of violations, at 38%. Does the consumer really have to face fruit salad roulette at the grocery store.

American farmers have a right to be angry when they see foreign producers competing against them using chemicals that they can't use here. And American consumers have a right to be angry since almost no foreign agricultural products get tested at our borders and many residues are virtually untestable at entry. Without accurate and complete EPA export information shared with other federal agencies and foreign governments, border inspectors will not even know which pesticide residues to look for.

While EPA has attempted to correct some of these problems since our hearing, their regulations don't go far enough. The Agency proposal merely tightens the requirements on export labels, trusting the users, importers and food inspection agencies to prevent reintroduction of unregistered products. This is like putting a band-aid on a broken leg. Only one solution will work --a prohibition on the export of unregistered and banned products except for limited research and medical purposes. This step requires new legislation.

But putting controls on banned or unregistered products is not enough. Our bill puts new requirements on the export of resticted use pesticides, the most hazardous types of products which are still used legally here at home. We require that foreign governments give Prior Informed Consent before these products are exported to willing countries. This contrasts with the EPA proposal which gives no special protections against restricted use pesticides and limits the receipt of notice provisions solely to foreign purchasers.

We also tighten up requirements on the information supplied to EPA by exporters so that the Agency can adequately police compliance with the law. Export product labels must also be written in the language of the importing country and include all of the information which would be contained on U.S. labels.

In addition, the bill reduces the kinds of data which can be withheld from the public as confidential business information and sets up a strict notification scheme to let foreign governments know of important EPA pesticide regulatory decisions.

Finally, not only is the bill important for protecting our own consumers and farmers and those in foreign countries, it is also important for protecting the good name of our country. We should not be sending abroad those products which we have determined are detrimental to public health or the environment.

**STATEMENT OF**
**LINDA J. FISHER**
**ASSISTANT ADMINISTRATOR**
**FOR PESTICIDES AND TOXIC SUBSTANCES**
**U.S. ENVIRONMENTAL PROTECTION AGENCY**
**BEFORE THE**
**COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY**
**UNITED STATES SENATE**

**MARCH 28, 1990**

Good morning. I am Linda Fisher, Assistant Administrator for Pesticides and Toxic Substances at the U.S. Environmental Protection Agency (EPA). I appreciate the opportunity to testify before you this morning on EPA's proposals to strengthen implementation of Section 17 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), our current international activities related to pesticide exports, and pending pesticide export legislation. Although we do not support S. 2227 as introduced, we do believe that the provisions of FIFRA governing the export of pesticides need to be strengthened to address growing concerns about international trade in banned and severely restricted pesticides.

As with so many environmental issues, we are finding that the ramifications of our actions with respect to pesticide regulation are increasingly important in an international context. As an importer of fruits, vegetables and other foods, the U.S. clearly has an interest in ensuring that these crops meet the same health and safety standards we require of domestically-produced foods. Second, as an exporter of food and fiber, we want our products to be able to compete on a level playing field internationally. Third, as an exporter of pesticides, the U.S. has an obligation to help ensure that pesticides are used responsibly around the world.

As a result of our current regulatory process, EPA maintains an extensive data base on pesticides registered in the U.S. We have a responsibility to share that information with other countries and to work together with them to achieve public health and environmental protection goals that will benefit citizens in the world.

Congress, EPA, international organizations and other countries all share a concern about the international trade and use of pesticides. We are committed to the protection of the global environment, public health and a safe food supply around the world. We must work together to identify the most effective ways to achieve these common ends.

**POLICY GOALS**

EPA's primary goal in its international pesticide activities is to improve the protection of public health and the environment from unreasonable adverse effects of pesticides throughout the world. Our international activities are structured to enable us to achieve this goal. First, we work with the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) to protect the American consumer from illegal pesticide residues on both imported and domestically produced food products, and to ensure a "level playing field" for U.S. producers by applying equal standards to all foods. Second, the Agency is assisting other countries in the development and implementation of programs to assure the safe use of all pesticide products. We are committed to sharing the information and technical expertise necessary to accomplish these objectives, and we have therefore recently proposed significant improvements in the programs we have had in place for some time under Section 17 of FIFRA.

Unilateral export controls cannot solve the problems associated with the misuse of pesticides abroad nor will they necessarily enhance food safety in the U.S. The U.S. should continue to play a leadership role in promoting food safety and responsible pesticide use worldwide, but it is also important to recognize that the U.S. is only one participant in the world pesticide trade. We must work effectively with other countries and international organizations to achieve our goals. A comprehensive global strategy that imposes constructive obligations on exporting countries to share knowledge and expertise, and that respects and strengthens decision-making in importing countries so that they can exercise a right of "prior informed consent" to pesticide imports, should be the focus of a responsible policy on international trade in pesticides. This is the aim of the EPA efforts I will discuss today. I also believe more needs to be done. Although we do not support S. 2227 as introduced, we do believe that some legislative changes to the current FIFRA are appropriate and want to work with you to secure their enactment.

Allow me to turn first to the Agency's current statutory responsibilities related to the export of pesticides, and then describe the proposals published for public review and comment on February 12, 1990.

## CURRENT FIFRA REQUIREMENTS

As you know, under the current FIFRA Section 17, pesticides intended solely for export are exempted from most requirements of FIFRA. Section 17 retains certain labeling requirements for exported pesticides and establishes two distinct systems of international notification regarding pesticides: one involves the export of unregistered pesticide products; and the other involves significant regulatory actions taken by EPA. The first type of notice is sent to the government of the importing country, while the second is sent to all governments world-wide. EPA has implemented these requirements in ways that are designed to prevent overloading the information-sharing system, in order to focus attention on important actions and enhance the usefulness of our notifications to potential importing countries.

Under FIFRA Section 17(a)(2), a foreign purchaser of an unregistered pesticide product must sign a statement, prior to export, acknowledging that the product is unregistered and cannot be used or sold in the United States. EPA policy requires the U.S. exporter to obtain this statement for the first shipment each year to a specific purchaser in a particular country. The notice must be submitted to EPA within seven days of its receipt by the purchaser, or by the date of export, whichever occurs first. A copy of the statement is transmitted to the government of the receiving country. Our current policy limits this notification requirement to pesticides that are not substantially similar in composition and use to products which are registered for use in the U.S. EPA transmits approximately 200 such notices each year.

In addition, under Section 17(b), EPA notifies other countries whenever a pesticide cancellation or suspension based on concerns about health or environmental risks, becomes effective or ceases to be effective. Since these notices of control actions have been limited to regulatory actions which are considered to be of international significance, they are less numerous.

**EPA'S ENHANCED SECTION 17 POLICY PROPOSALS**

In response to an internal Agency review, a study by the General Accounting Office, and information presented at a Congressional hearing last spring, EPA recently proposed changes in its export policies designed to enhance their effectiveness in reaching our public health and environmental protection goals. We have proposed amending the policy regarding the labeling requirements for all exported pesticide products and the procedures for exporting unregistered pesticides, and expanding the policy regarding notification of other governments whenever significant regulatory actions are taken.

We are proposing either to eliminate the exemptions currently provided in our 1980 policy for unregistered pesticides, or to require records and/or reports to substantiate the exemption claims. The proposed policy also clarifies the labeling requirements, and solicits comments on whether the timing of the submission of the purchaser acknowledgement statements should be changed and whether statements should be transmitted directly to appropriate importing government officials, rather than through the U.S. State Department. In addition, we are proposing that, where appropriate, the purchaser acknowledgement statements must be multilingual.

We intend to send notices on a broader array of regulatory actions in a more useful format. Some notices of health or environmental significance will be transmitted immediately, while others of a more administrative nature will be compiled annually or semi-annually and transmitted in a summary fashion. We also intend to improve the timeliness of the notifications and improve the channels of communication with other countries, so that if a notice prompts a request for additional information, we can follow-up quickly.

In addition, we have proposed to issue a class determination regarding the confidential nature of information collected on pesticide exports; specifically, EPA does not believe that the country of final destination should be accorded confidential treatment. Such information could be provided to FDA without restriction for use in targeting imported food monitoring programs.

EPA believes that the information provided under both notification systems is useful for the informed decision making of other countries. Our new proposals are aimed at enhancing the effectiveness of our international notifications and ensuring that countries importing American-made pesticides will receive timely and meaningful information that will assist them in their efforts to improve the regulation of pesticide chemicals.

In order to ensure that our final policy takes into account the views of the many interested parties concerned about the international trade in pesticides, we have allowed for a 90-day public comment period on the proposals. We have circulated them widely and brought them to the attention of the regulated community, public interest groups, other governments and international organizations. We want to have a strong policy under Section 17 that is effective and consistent with both the U.S.'s leadership position in the international environmental movement and current international approaches to improved information exchange on pesticide exports.

## CURRENT INTERNATIONAL INITIATIVES

In 1989, the Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP) jointly adopted procedures to implement the principle of Prior Informed Consent (PIC) for trade in pesticides and industrial chemicals which have been banned or severely restricted. The fundamental premise of the PIC approach is that importing countries should be able to make informed decisions on which pesticides they choose to receive, in advance of actual shipments. Therefore, with U.S. support, FAO and UNEP are establishing mechanisms that will facilitate information exchange and effective communication of the decisions made by participating countries. FAO will implement the PIC system for pesticide notifications, while UNEP has responsibility for industrial chemicals and maintaining a common data management system.

The scope of the international PIC system will be limited to those products that have been "banned or severely restricted" for health or environmental reasons. "Banned or severely restricted" pesticides include chemicals for which all or a significant number of uses are prohibited by final government action or voluntarily withdrawn for health or environmental reasons, as well as new chemicals that a government has refused to allow to be used. In addition, the PIC procedures will cover pesticides formulated with active ingredients found by FAO experts to pose potential risks under conditions of use in developing countries.

Participation in the system will be voluntary on the part of importing countries. All exporting countries are expected to participate and have agreed to the adoption of the procedures. Each country will submit a list of pesticides it has banned or severely restricted, and an international list of prior actions will be developed. Participating importing countries will be asked to decide whether or not they want to permit importation of pesticides on the international PIC list. To guard against misuse of the system as a trade barrier and help assure that potential risks are reduced, the decision to deny the import of a pesticide from a particular country must be accompanied by assurances that the country will neither import the same product from another source nor produce the pesticide for domestic use. The decisions of importing countries will be communicated to exporting nations. Upon receipt of a refusal from an importing country, an exporting government must inform its pesticide industry of the decision and take steps to the extent possible under its own laws to prohibit export of unwanted chemicals. The list of banned and severely restricted pesticides will be updated as countries take and announce regulatory actions.

This PIC system was adopted by consensus, with the support of the U.S. and other major exporting and importing countries. It will become operational over the next year. In November, 1989, FAO sent letters to all member states, requesting them to designate a national authority to serve as the point of contact for PIC procedures and to indicate whether they wish to participate in the system as importing countries.

Additionally, FAO and the World Health Organization (WHO) sponsor ongoing activities aimed at developing international food safety standards under the auspices of the Codex Alimentarius Commission. EPA, USDA and FDA are active participants. Codex is seeking to harmonize standards internationally, in order to simplify the system and facilitate compliance, thus making more effective enforcement possible across the board.

## IMPLEMENTING "PIC," EXPANDING TECHNICAL ASSISTANCE, AND ENHANCING ENFORCEMENT

EPA took a leadership role in the development of the international PIC system and is implementing the procedures to the extent we can under current FIFRA. We took the international information exchange and PIC procedures into account when we developed our export policy proposals.

We are also expanding our technical assistance activities to help improve the regulatory infrastructure of countries that desire assistance, with particular emphasis on major sources of food imported into the U.S. During the development of the FAO/UNEP PIC system, the U.S. consistently stressed the need to enhance regulatory procedures in importing countries, not only for PIC chemicals but for all others as well.

Over the past two years we have worked cooperatively with FAO and other international agencies to develop and implement a series of regional workshops on pesticide regulation designed to enhance regulatory capacity across-the-board. These workshops have been conducted for countries of the Asia/Pacific region and Latin America, and have covered just about every aspect of pesticide regulation, from data requirements to risk/benefit assessment methodologies to enforcement strategies. In addition, we have provided technical assistance to developing countries to deal with specific problems, such as the locust plague in Africa and disposal of old pesticides in African countries and Pakistan. We have also held numerous workshops with government representatives and grower groups which export food to the U.S. in order to educate them about U.S. import requirements.

We plan to enter into memoranda of understanding with the Agency for International Development (AID) and the Peace Corps to work with them on providing technical assistance designed to help countries exporting food to the U.S. strengthen all aspects of pest management and responsible pesticide use. Initial projects undertaken by EPA-AID are planned for Central America. We anticipate expanding this collaborative program to other parts of the world as resources permit.

Finally, we have taken steps to upgrade enforcement. Based on a preliminary review of the inspections conducted last summer, it appeared that some exporters were not complying fully with the requirements of section 17(a), indicating a need for enhanced enforcement in this area, as well as a need for changes in the existing export policies. As a result, during the past three months, EPA has filed administrative complaints against eight companies, seeking penalties totaling over $2.8 million. The charges include: export of pesticides labeled only in English to countries in which English is not an official language; failure to obtain the purchaser acknowledgement statement for pesticides not registered in the United States; and failure to label unregistered pesticides with the statement, "Not Registered for Use in the United States of America."

I intend to continue an active export compliance monitoring program. Accordingly, the Agency's State Cooperative Enforcement Agreement Guidance now contains provisions which highlight export compliance monitoring activities. Because States conduct the majority of pesticide compliance inspections, this should help ensure an effective enforcement program in the export area.

Taken together, I believe EPA's new proposals, our enhanced technical assistance and enforcement activities, and the international information exchange and PIC systems should serve as the core of a responsible and progressive approach to the concerns and issues that have been raised about the international trade in pesticides.

**LEGISLATIVE PROPOSALS**

Although our Federal Register proposals will go far in addressing export policy concerns under existing law, we believe that FIFRA needs to be strengthened if we are to achieve our goals for dealing effectively with pesticide regulatory issues in the international arena. However, we do not support S. 2227 as introduced. We believe that many of its provisions would place an unworkable regulatory burden on EPA, interrupt legitimate export of pesticides produced by U.S. companies, and provide no additional health protection in terms of the safety of the U.S. food supply.

Earlier this month, the Administration transmitted detailed legislative language to your committee that would amend FIFRA in connection with the President's initiative on food safety. Included in our proposals are amendments to FIFRA Section 17 designed to allow us partially to implement the international PIC system.

These proposed changes would permit us to issue regulations requiring compliance with PIC notification procedures in lieu of current Section 17 notification requirements, thus permitting us to avoid unnecessary, duplicative requirements. The Administration's amendments also would make pesticide exports subject to FIFRA's storage, transport and disposal and container design provisions. Generally, this would mean that cancelled pesticides would be required to adhere to transportation and storage requirements while in this country. The Administrator could also require that pesticides destined for export adhere to specific container design requirements.

In addition to the proposals already transmitted, we believe further legislative changes to FIFRA are needed if we are to implement fully the true prior informed consent system agreed to internationally.

In order to facilitate full compliance with the international PIC system, Section 17 of FIFRA should be amended to enable EPA to prohibit pesticide exports in certain limited circumstances. Specifically, we support amendments to prohibit exports if an importing country notifies us that it does not wish to receive shipments of a pesticide that has been banned or severely restricted in the United States. The country would have to certify that it has prohibited import from any other source and is not producing the pesticide for domestic use.

We would continue our current, upgraded notification practices, so that importing countries would have the information needed to decide whether or not they want to receive banned or severely restricted pesticides. In accordance with the agreements reached internationally, if there is no response to our notifications to indicate whether the country wishes to receive the pesticide, we would distinguish between two categories of importing countries based on past history, i.e., exports could continue to a country that has received shipments in the past unless that country notifies us to the contrary, but a "new" country of destination would have to consent to the export, or the exporter would have to provide evidence that the product is fully legal in that country. (The FAO/UNEP procedures, when implemented, would provide one mechanism for such a showing.)

We would also make it clear that EPA may issue regulations to implement international PIC requirements adopted with U.S. approval when they are fully operational, and that compliance with these requirements could substitute for compliance with FIFRA requirements to avoid unnecessary regulatory burdens and duplication of effort.

The policy advantages of this approach are that it provides importing countries with the information they need to make sound decisions; it respects the sovereignty of foreign nations by declining to impose our judgments on them, while acknowledging that some level of enforcement/implementation of their decisions could be facilitated by controls under U.S. law; it sets forth relatively clear and simple criteria; and it does not unduly and unilaterally disadvantage U.S. producers in international competition.

We believe that this kind of PIC mechanism under FIFRA could form the basis for an enhanced, workable and responsive U.S. export policy, when combined with expanded information exchange and cooperative assistance to foreign countries that desire it.

By contrast, many of the provisions of S. 2227 as introduced are quite troubling, both conceptually and practically. By generally banning all exports of unregistered pesticides and restricting the export of other types of pesticides to a list of countries that EPA must find to have acceptable regulatory systems, the bill takes an extremely paternalistic view, imposing U.S. criteria for risks and benefits on the rest of the world and undercutting the progress we are making at the international level. We need to strengthen, support and respect other countries' regulatory programs and decisions, not impose our own regime on them.

The approach contemplated in S. 2227 does not guarantee that potentially hazardous pesticides would not be used or misused abroad, because the same pesticides could be purchased from other exporters. Pesticides are traded internationally, with other industrialized countries supplying a large percentage of the world market. The U.S. only exports about 10 per cent of total world pesticide consumption, not including wood preservatives or disinfectants. Additionally, it can not be assumed that a pesticide poses unacceptable risks simply because it is not registered for use in this country. A particular pesticide may not be registered in the U.S. because it is not needed here given our climate, crop or pest control needs.

As currently drafted the bill would require EPA to make risk/benefit decisions for other countries. The bill would also require EPA to evaluate and rate the programs of other nations' regulatory bodies with whom we need to work to achieve our common public health and environmental protection mission. We do not believe we have the resources or the expertise to make such judgments, and this is not EPA's role.

Finally, the bill does not meaningfully improve enforcement of existing law, which already bars the import of foods containing residues not allowed under U.S. tolerance regulations. Instead, S. 2227 imposes a number of new requirements on importers of food products. While EPA must generally defer to the Food and Drug Administration and the U.S. Department of Agriculture on the potential usefulness of such measures, our interagency discussions have indicated that initiatives are already underway, as part of the Pesticide Monitoring Improvements Act enacted by the last Congress, that aim to secure pesticide usage information from other countries without raising the specter that the U.S. will be accused of erecting trade barriers by imposing burdens on foreign producers that we do not apply to U.S. producers.

As I mentioned earlier, we believe Codex-sponsored activities to move toward internationally consistent tolerances for pesticide residues in foods offer promise in terms of enhancing food safety and ensuring that food products moving in international trade meet our safety standards. We believe that changes need to be made to improve the Codex process, and we are working within the Codex system to effect those changes. Total harmonization may not be possible, of course, since our responsibility to protect the health of U.S. citizens cannot be delegated and may sometimes preclude full acceptance of Codex levels. Overall, however, a strong international standards program for food is a critical element of the comprehensive approach we support.

## CONCLUSION

Clearly, our approach to improving and strengthening export policy differs in important ways from that taken in S. 2227. But we share a belief that the U.S. has an obligation to our citizens, to our farmers, and to other nations in making and implementing environmentally sound pesticide regulatory decisions.

Beginning with the adoption of export notification procedures under FIFRA in the late 1970's, the U.S. has continued to be a leader in implementing responsible export policy initiatives. We must build on our past leadership to achieve meaningful progress in improving public health and environmental protection worldwide. We can do this best by moving ahead to strengthen FIFRA to provide for a PIC system, by enhancing EPA's notification system as proposed, and by stepping up our education and training activities to improve pesticide regulatory programs throughout the world. I hope that we will be able to work together to reach these goals.

Thank you for the opportunity to share our thoughts with you today.

Statement of
Mercedes Bolanos de Moreno, Ph.D.
Ecuador
Before the
Committee on Agriculture, Nutrition and Forestry
U.S. Senate

March 28, 1990

Good Morning, Mr. Chairman and Members of the Committee. I would like to thank you for inviting me to present my opinions on the "Pesticide Export Reform Act of 1990," and what this bill means to my country, Ecuador. In short, the Act would be a direct benefit to Ecuador and in very practical terms will assist our ability to regulate the imports of these hazardous products.

Let me give you some background on the status of pesticide regulation in Ecuador. The Plant Protection Program is responsible for pesticide control. In the 7 years since 1983, we have had five laws governing pesticide use. Decree No. 2331, passed in 1983, covered the regulation and monitoring of the import, distribution and use of pesticides. Under this decree, 25 pesticides were banned in 1985, including the organochlorine pesticides chlordane and heptachlor, aldrin, dieldrin, endrin, BHC, camphechlor (Toxaphene), DDT, and lindane. Also banned were chlordimeform, DBCP, EDB, 2,4,5-T, amitrole, all compounds which contain arsenicum, mercury and lead, carbon tetrachloride, leptophos, chlorbenzilate, methyl, diethyl and ethyl parathion, mirex, dinoseb and pentachlorophenol. I note here that many of these pesticides came from the U.S.

However, in 1986, a new decree overturned the 1983 Decree, and completely deregulated the import of pesticides. This meant that for the next two years, any pesticide could be imported with no controls. In 1988, thanks to pressure from ecological groups and associations of concerned professionals, a new decree was passed which prohibited the import of the same pesticides as before.

The story does not end there. In December, 1989, yet another decree was passed, this time loosening import restrictions. Any farmer association or agricultural chamber can now import any pesticide whose active ingredient is registered in the Plant Protection Program.

The process of pesticide registration in the Plant Protection Program of Ecuador is simply a check to see if all the data required by the decree is present. The data for an individual product are provided by the importers and if the regulatory agency has information from another source it is simply compared. We do not have the person power or financial resources to evaluate these studies thoroughly or conduct any of our own.

The U.S. pesticide registration process is far more extensive and permits regulators to evaluate all the risks associated with a product's use. This requires extensive research about the potential health effects as well as the behaviour of the pesticide in the environment and on treated crop. This reform effort will significantly improve the amount of information on the products we will receive in the future since it will have had to pass the full registration process in the USA. We then can have access to all the information that we do not have the capacity to produce for lack of resources. For example, thanks to information from EPA in 1980, we were able to prohibit DBCP in Ecuador.

With this background, how could I miss this opportunity to express my satisfaction and my vigorous support for the Pesticide Export Reform Act of 1990?

While we depend to a large extent on U.S. information, but also turn to other references, such as data from the United Nations Food and Agricultural Organization (FAO) and the World Health Organization (WHO). Our system illustrates the importance of free, available information about pesticides, their health and environmental effects and alternative controls -- whether chemical or not -- and other information on which we can establish the policies and decisions that can be made in the country in respect to a pesticide.

I should note that the current decree establishes that if a pesticide has been prohibited in the country of origin or in any other country we can use this information to prohibit its use in Ecuador, if necessary. To be able to take such an action, we need information. Unfortunately we have received very few notices of changes in pesticide registrations from EPA, in fact, only 8 for pesticide registration changes and 3 for tolerances changes. I never received notices regarding the removal from the U.S. market of the pesticides cyhexatin, diazinon, dicofol, dinoseb, chlordane/heptachlor or aldrin/diedrin. We would have liked to get information when EPN, captafol and carbon tetrachloride were taken off the U.S. market, but EPA did not send it.

We also need information to control food residues since maximum residue levels or tolerances have not been established in Ecuador. We use the tolerances of Codex Alimentarius or EPA-established tolerances.

## Pesticide Commerce:

Under this series of laws and amendments, 639 pesticide formulations, based on 359 active ingredients, have been registered for use as commercial formulations. While we do not produce any pesticides in Ecuador, there are 5 formulation plants. At least 50 multinational companies operate in the country, including some of the world's largest: FMC, DuPont, Chevron Chemical, Dow Chemical, American Cyanamid, Abbott Labs, Ciba Geigy, Sandoz, ICI, Bayer A.G., Hoechst A.G., Rhone Poulenc, Shell, Marman, BASF, Makhteshim Chemical Works Ltd., Pillar International and Pennwalt Holland.

Pesticides are imported mainly from the U.S., but also from Germany, Colombia, Switzerland, the United Kingdom, Israel, Holland, China, Taiwan, France, Italy and Japan. The table below gives the amount of pesticides imported to Ecuador during 1989:

| Pesticide | Quantities in Kilograms | | U.S. $ |
|---|---|---|---|
| | Formulation | Active Ingred. | |
| Insecticides | 861,329 | 316,446 | 5,487,185 |
| Fungicides | 936,220 | 607,687 | 4,618,526 |
| Herbicides | 2,352,883 | 1,198,443 | 9,198,228 |
| Nematicides | 1,745,580 | 188,085 | 4,220,587 |
| Formulation cmpd. | 1,117,035 | 493,130 | 4,690,697 |
| Adher. and Emulsif. | 22,828 | 19,597 | 59,816 |
| Related Ings. | 128,221 | 28,282 | 516,586 |
| TOTAL - (Kilos) | 7,164,096 | 2,851,670 | 28,791,625 |
| (Pounds) | 15,761,011 | 6,273,674 | |

Included in the amount of herbicides is at least one that has never been registered in the U.S. but is allowed to be exported from your country -- the Monsanto herbicide Machete, also known as butachlor. In 1989, Ecuador imported 352,919 pounds of Machete for use on rice.

Let me show you the amount of pesticides on the extremely and highly hazardous pesticides (according to the World Health Organization's list of Ia and Ib acutely toxic pesticides) imported from the U.S. during 1989 and percentages of total pesticide use, to illustrate the degree of use of these hazardous pesticides.

U.S.-Produced Highly Toxic Pesticides Exported to Ecuador-1989:

| COMMON NAME | TOTAL AMOUNT pounds | ACTIVE INGRED. pounds | VALUE US$ |
|---|---|---|---|
| Aldicarb | 530,640 | 79,596 | 1,185,738 |
| Cypermethrin | 2,640 | 528 | 18,800 |
| Methamidophos | 271,744 | 161,946 | 574,403 |
| Methomyl | 9,099 | 8,188 | 81,991 |
| Oxamyl | 37,556 | 9,011 | 121,730 |
| Carbofuran | 500,940 | 82,797 | 688,760 |
| Ethoprop | 887,920 | 88,792 | 651,601 |
| Fenamiphos | 33,000 | 23,100 | 217,050 |
| Terbufos | 1,081,200 | 108,020 | 1,256,150 |
| TOTAL: | 3,354,739 | 561,978 | 4,796,223 |

In other words, in 1989, the U.S. supplied 63% (total value in U.S. dollars) of the highly hazardous pesticides (on WHO 1a and 1b lists) imported into Ecuador.

## Pesticide Poisonings:

Toxic pesticides can be imported despite the fact that Ecuador does not have a pesticide regulatory system that can determine the effects of pesticides on humans and the environment; remove from the market any pesticide found to be unsafe or ineffective; or control pesticide use according to regulatory approval. In short, Ecuador does not have an effective regulatory apparatus to control hazardous pesticides.

One example of the lack of control, is that in Ecuador many field workers use hazardous pesticides without protective equipment. Only 5% of these workers use protective clothing. There is no regular monitoring to determine levels of acute and chronic poisoning and environmental contamination. Pesticide poisoning is not easily recognizable and often is treated as some other form of ailment. As a result, there is a significant under-reporting of pesticide poisonings throughout the country.

In some cases, specific active ingredients are linked to poisonings although often only the family of pesticide is known. Nevertheless, it is clear that the wide spread of pesticide incidence of injury and death results from the exposure of illiterate, ill-informed and unprotected people to poorly regulated, freely available, and highly toxic pesticides such as those on the WHO Class Ia and Ib lists and those banned or severely restricted in the U.S.

I would like to describe some examples of poisoning cases which have taken place during this year alone that I am aware of: 10 deaths from the use of methamidophos and monocrotophos when the pesticides were applied on tomatoes and other vegetables. At least 1 intoxication per week occurs from the application of endosulfan (Thiodan) on palm oil trees and coffee.

## Pesticide Misuse:

Now let me talk briefly about problems with pesticide misuse and overuse. The very nature of the products, combined with such malpractice as applying pesticides by schedule - for instance every 15 days - whether or not it is necessary, results in serious effects on the health of all living organisms and the environment. The harvest intervals often are not observed so the levels of pesticide residues in some foods could be very high. In a recent study of methamidophos residues in tomatoes, 60 samples were taken in 5 local markets. We found that the residues of methamidophos were 4 times higher than the tolerances listed in the Codex Alimentarius. Run-off from pesticide spraying into the canals causes problems for people living alongside the canals who use them for fishing and drinking water. Pesticides containers often are washed out in the canals.

Poisoning by pesticide is the most common form of poisoning and the most commonly used pesticide is paraquat. An epidemiological study of poisonings in one province of Ecuador carried out between 1980 and 1989 found that there were 2,017 poisoning cases during this period. Of these, 29% were due to pesticides although there were no official pesticide poisoning reports. This represents a 100% failure to register this class of poisoning.

### Environmental Contamination is Widespread:

Residues in food, water and soil also is a big problem. A 1985 market basket survey found many vegetables with high levels of residues of organochlorine insecticides such as heptachlor and lindane, as well as organophosphate pesticides. An investigation of human milk that same year showed high residues of heptachlor, chlordane, lindane, aldrin, and DDT. The level of heptachlor in the breast milk was four times the level permitted in cow milk.

These results, plus the information of agencies as EPA, gave us the information necessary to support the proposal from the Plant Protection Program to ban the use of these pesticides in Ecuador, a proposal that was approved by the President. Although this decree was overturned in 1986, it was re-instated with the adoption of the 1988 decree.

### Private Sector Alternatives to Pesticides:

Despite the limitations mentioned, there have been strong private sector efforts made to control pesticide use. We also have achieved good results concerning the implementation of the concept of Integrated Pest Management (IPM), although this effort is not financially supported by the Ecuadorian government.

IPM, for example, is being used to control rust and weevils in coffee. For this crop, which makes up 500,000 hectares, we are using varieties naturally resistant to rust and applying cultural and biological control, the last one with a wasp introduced from Uganda. Only as a last measure do farmers use a chemical control.

IPM is becoming popular because if we follow the technical recommendations, we would need to apply 4 liters of insecticide per hectare, or 2 million liters of just one insecticide for just one insect. We would use 750,000 kilos of one copper-based fungicide for rust, (at 1.5 Kg/hectare) in order to control a single fungus.

Another example of IPM is for the control of nematodes attacking tree tomatoes. Using a combination of organic and chemical fertilizers and no nematicides, the tree tomato shows a remarkable improvement over those plants treated only with nematicides.

### Summary:

To summarize many of the above points, based on my 18 years of experience within the Plant Protection Program, I can tell you that:

1. Ecuador does not have a pesticide regulatory system that can determine the effects of pesticides on humans and the environment; remove from the market any pesticide found to be unsafe or ineffective; or control pesticide use according to regulatory approval. In short, Ecuador does not have an effective regulatory apparatus to control extremely and highly hazardous pesticides.

2. The Plant Protection Program does not receive the political, technical or financial support needed to monitor pesticide use; pesticide residues in food, water, soil or air; or short and long impacts of pesticides on human and environmental health.

3. Given our climatic, cultural and social conditions, including the actual situation of the rural population and the lack of medical and epidemiological infrastructure and environmental monitoring, THE SAFE USE OF TOXIC PESTICIDES IN ECUADOR CANNOT BE ASSURED.

4. Ecuador, like many developing countries, is not in the condition to guarantee that highly toxic pesticides will be used in even a relatively safe manner. In order to remove them from the market, it is vital to have systematic and rapid access to all available information on both chemical and non-chemical alternatives to their use.

This is especially true in the case of pesticides in the WHO category IA and IB, which are used extensively in Ecuador. It is also true that were appropriate Integrated Pest Management techniques to be supported, the natural enemies of many of the pests we now try to control with chemicals would have the chance to help us reduce our need for these pesticides.

There is a final point I feel it is important to make. The reform effort we are discussing today is an initiative of the United States to control the export of pesticides from within its borders. The Pesticide Export Reform Act of 1990 is an important expression of leadership, and I am sure that the example the U.S. is setting with this Act will be followed and adopted by other industrialized pesticide producing countries, who will now realize it is also in their interest to protect themselves from the residues of these pesticides.

But it is critical to note that this approach alone does not resolve the terrible problems caused by highly toxic pesticides in developing countries, and may even add to them if additional measures are not taken to stop the production of dangerous pesticide products and agressively support alternative agricultural methods.

Permit me here to expand our challenge to include ending the production of highly hazardous pesticides everywhere, not just because the "Circle of Poison" returns them to U.S. dinner tables, but because the people of countries wherever they are used, like Ecuador, are also human beings who deserve to live and prosper in good health.

SECRETARIA DE AGRICULTURA
Y
RECURSOS HIDRAULICOS

OFICIO No. 2261394
EXPEDIENTE: EPA/SV

ASUNTO: IMPORTACION 'DINOZEB'

Mexico,D.F. 17 de agosto 1989

Atencion Sr. Victor Kim o administrador substancias toxicas
ante EPA

Senores

Estamos conscientes que el producto DINOZEB no es una marca registrada para la venta en Estados Unidos de Norteamerica.Necesitamos con urgencia su aprobacion para la importacion de este producte a la Republica Mexicana para uso enfrijol.que no sera exportado para ningun otro pais.sino para consumo dentro de Mexico

ATENTAMENTE

I.A.Z. Josue N. Gonzalez
Delegado

---

Attn: Victor Kim or Acting assistant administrator of Toxic substances of EPA.

Gentlemen:

We are aware that Dinozeb is not registered for sales or use in the United States of America. We urgently need your release of this product for Import into the Republic of Mexico for use on Beans which are not for export to any country. They are for consumption in the Republic of Mexico.

TRANSLATOR ROBERTO RAMIREZ / BRAVO EXPORTS / [illegible]
[illegible] DIV / 512 540 [illegible]

TOTAL P.01

SECRETARIA DE AGRICULTURA
Y RECURSOS HIDRAULICOS

DIRECCION GENERAL DE SANIDAD VEGETAL.DIREC
DE INTEGRACION Y REGULACION FITOSANITARIA.
SUBDIRECCION DE REGULACION Y REGISTRO.
DEPENDENCIA
312.01.03
NUMERO DEL OFICIO
EXPEDIENTE

ASUNTO: TELEFAX 2023824470

México, D.F., 30 de julio de 1989

EDWIN JHONSON
DEVELOPING COUNTRIES STAFF OIA
ENVIRONMENT PROTECTION AGENCY (EPA)
WASHINGTON, D. C.

En relación a la petición de importación del plaguicida denominado DINOSEB, que les fue solicitada mediante oficio No. 2261394, de fecha 17 de los corrientes, por el I.A.Z. Josue N. González, quien se hace pasar como Delegado de la Secretaría de Agricultura y Recursos Hidráulicos en el Distrito Federal, le comunico lo siguiente:

1. El Plaguicida denominado DINOSEB, tiene cancelado su Registro en México, por causar problemas en la salud humana, por lo que no se autoriza la importación de dicho producto al país.

2. A partir del día 17 de julio del presente año, los permisos o autorizaciones y registros de plaguicidas son firmados por el Comité Técnico de la Comisión Intersecretarial para el Control del Proceso y Uso de Plaguicidas, Fertilizantes y Sustancias Tóxicas, debiendo tener al calce las firmas de: Director General de Sanidad Vegetal. (SARH), Director General de Salud Ambiental, Ocupacional y Saneamiento Básico. (SSA), Director General de Prevención y Control de la Contaminación Ambiental. (SEDUE).

   Anterior a esta fecha, un importador requería de 3 documentos diferentes firmados por las autoridades señaladas.

   Se anexa ejemplo,

3. La solicitud hecha por el I.A.Z. Josué N. González, no tiene ninguna validez oficial, ya que dicha persona no tiene ningún cargo ni relación de trabajo dentro de la Secretaría del Ramo.

A T E N T A M E N T E
SUFRAGIO EFECTIVO. NO REELECCION
EL DIRECTOR GENERAL

DR. MOISES TELIZ ORTIZ

AL CONTESTAR ESTE OFICIO, CITENSE LOS DATOS CONTENIDOS EN EL CUADRO DEL ANGULO SUPERIOR DERECHO.

c.c.p.- Dirección de Integración y Regulación Fitosanitaria.-Edificio
c.c.p.- Subdirección de Regulación y Registro.-Edificio

SAA* IJCS* egc

United States of Mexico
Secretariat of Agriculture
and Water Resources (SARH)

Mexico, Federal District, July 30, 1989
(letter actually written on Aug. 30, 1989)

Edwin Johnson
Developing Countries Staff
EPA
Washington, DC

In regards to the import request of the pesticide Dinoseb that was solicited in Memo #2261394 dated the 17th of this month by I.A.Z. Josue N. Gonzalez posing as a delegate of the Secretariat of Agriculture and Water Resources (SARH), I inform you of the following:

1. The registration of the pesticide DINOSEB has been cancelled in Mexico because of human health problems and thus the importation of this product is not authorized into this country.

2. Beginning the 17th of July of this year, the permits or authorizations and registrations of pesticides are signed by the Technical Committee of the Intersecretarial Commission for the Control of the Processing and Use of Pesticides, Fertilizers and Toxic Substances (CICOPLAFEST). The permits must have at the foot of the page the signatures of: the General Director of Plant Health (SARH); the General Director of Environmental and Occupational Health and Basic Sanitation (SSA); and the General Director of Prevention and Control of Environmental Pollution (SEDUE).

   Prior to this date, an importer needed 3 different documents signed by the authorities noted above.

   A copy of the form is attached.

3. The request made by I.A.Z. Josue Gonzalez has no official validity since he has no position nor relation to the work within this Secretariat.

Signed,

Dr. Moises Teliz Ortiz
Director General of Plant Health

Translated by Cory Giacobbe, OIA, 8/31/89

**EMBAJADA DE GUATEMALA**
**2220 R Street, N.W.**
**Washington, D.C. 20008**

FAX # 798-89/N31

TO: Sherell Sterling, EN342 Compliance Branch Chief (382-7873)

FROM: Ricardo Aguirre, Deputy Chief of Mission

DATE: 9/22/89

NUMBER OF PAGES INCLUDING THIS ONE: 1

Dear Ms. Sterling:

I hereby confirm you, as I told you in our telephone conversation of Sep. 20, that the chemical named "Dinoseb", also known as "Dinatro" is not allowed to be imported into Guatemala due to the fact that it is not currently registered as a product of authorized entrance. This was told to me by phone by the Guatemalan office in charge of the environment (Spanish acronym: CONAMA).

Once again let me thank you for your valuable assistance on this matter.

Best regards.

SN
SEMINAL

Representante p
Guatemala, d

NK
NORTHRUP KIN
SEEDS

Guatemala, Septiembre 6 de 1989

Señor
Tony Villareal
TEX-AG
BROWNSVILLE, TEXAS

Favor de cotizarnos a la brevedad posible 3,100 galones del herbicida Dimitro 3, vía de embarque y tiempo de entrega; para éste efecto adjuntamos nuestro Certificado de Registro ante el Ministerio de Agricultura de nuestro país.

En caso de requerir algún dato, favor de hacérnoslo saber. (ASAP).

Atentamente,

R. V.

Ing. René Velásquez
Gerente General
SEMILLAS NACIONALES S.A.

1-12-86

DIRECCION GENERAL DE SERVICIOS AGRICOLAS
DIRECCION TECNICA DE SANIDAD VEGETAL
DEPARTAMENTO DE CONTROL Y REGISTRO DE -
AGROQUIMICOS

EMPRESA IMPORTADORA

MINISTERIO DE AGRICULTURA
GANADERIA Y ALIMENTACION
GUATEMALA, C.A.

## CERTIFICADO DE REGISTRO

De acuerdo a la solicitud de fecha 11-7-86 y toda vez que cumple con los requisitos establecidos en el Decreto 43-74, LEY REGULADORA sobre Importación, Elaboración, Almacenamiento, transporte, Venta y Uso de Pesticidas y su Reglamento, de la República de Guatemala, se otorga a ustedes el registro D.C.R.A. Importador No. 429

el cual los autoriza para importar: PLAGUICIDAS, COADYUVANTES Y FERTILIZANTES

A la Empresa: SEMILLAS NACIONALES, S.A.

Este registro no los excluye de cumplir con los requisitos que deben llenar en otras dependencias del Estado.

Guatemala, 21 de julio de 1986

DIRECTOR TECNICO DE SANIDAD VEGETAL a.i.
ING. AGR. FELIX ALBERTO DIAZ

JEFE, DEPTO. DE CONTROL Y REGISTRO DE AGROQUIMICOS

INGº AGR. CESAR AUGUSTO
Jefe del Departamento de Control Registro y Agroquímicos
Dirección Técnica de Sanidad Vegetal

09/07/1989 15:33 FROM C.R. INDUSTRIES, INC TO 13055163 P.01

MINISTERIO DE AGRICULTURA, GANADERIA Y ALIMENTACION
DIRECCION GENERAL DE SERVICIOS AGRICOLAS
DIRECCION TECNICA DE SANIDAD VEGETAL
GUATEMALA, C. A.
7a. Av. 3-67, Zona 13
Tel: [illegible]

D-SMA- OFICIO No. 101-89.

Guatemala, 7 de Septiembre de 1989.

A QUIEN INTERESE:

Por este medio se hace constar que el producto Agroquímico DIMITRO -3 (i.a. DINOZEB), utilisado como herbicida, pueda ser exportado a Guatemala, ya que no existe restricción alguna para su uso. Esto será autorisado siempre y cuando la Empresa interesada en importarlo, debe tener registrado dicho producto en este Departamento, para lo cual deberá presentar los certificados de Análisis, origen y libre venta extendidos por la oficina de Gobierno del país de origen y, debidamente consularisados; además de todos los requisitos necesarios para su respectivo registro en Guatemala.

Atentamente

Arnoldo Arévalo
Jefe del Depto de Supervisión y Registro de Agroquímicos.

ARNOLDO ARÉVALO
JEFE DEL DEPARTAMENTO DE SUPERVISION Y REGISTRO DE AGROQUIMICOS
Dirección Técnica de Sanidad Vegetal

c.c. Dirección Técnica de Sanidad Vegetal
c.c. Archivo.
Nlrf/-

## PART II. EXAMPLES OF INDUSTRY VIOLATIONS OF FAO'S CODE OF CONDUCT

**(NOTE: These are not related to the EPA enforcement actions on the previous page.)**

PHOTO OF A PACKAGE OF BENLATE IN PAPUA, NEW GUINEA

Benlate is the trade name for DuPont's fungicide benomyl, manufactured in Belle, West Virginia. EPA considers benomyl a possible human carcinogen, teratogen (birth defects), and mutagen (genetic damage).

The packaging on this pesticide is in violation of the FAO International Code of Conduct on the Distribution and Use of Pesticides, which calls for use restrictions and precautions to be written on the label. This product's label merely advertises the distributor's other products.

FRONT BACK

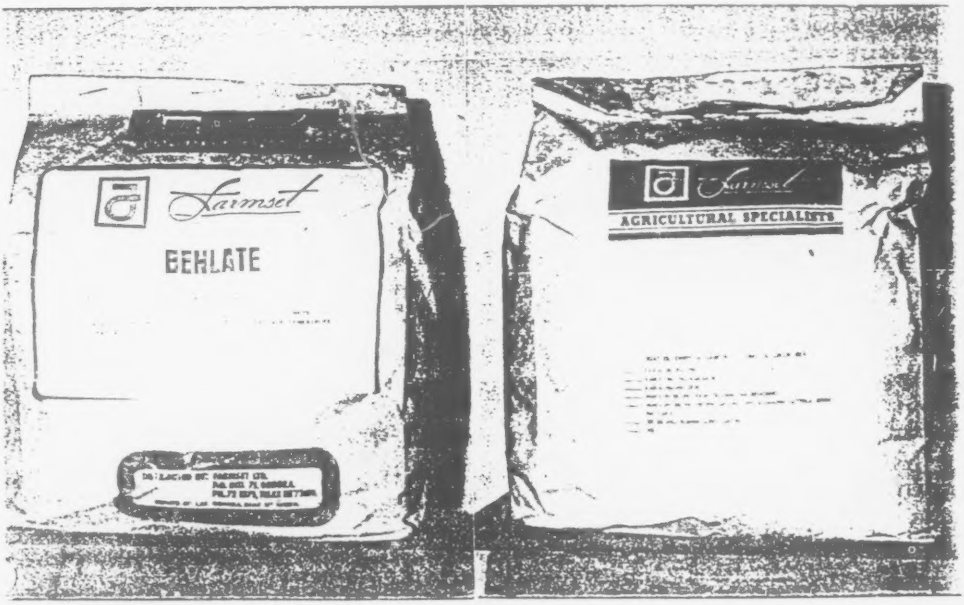


PHOTO OPPOSITE PAGE

Children in developing countries are frequently exposed to toxic pesticides. This picture is of a young Indian boy in Guatemala in the summer of 1989, returning from spraying his family's fields. Note the spray on his exposed right hand.

A 1988 study of pesticide poisonings in Colombia showed that 20 percent of the poisoning victims are children under 14 years of age.

GREENPEACE
Greenpeace USA • 1436 U Street NW • Washington DC 20009 • Tel (202) 462-1177
Tlx 89-2359 • Fax (202) 462-4507

Statement of

Sandra Marquardt, Greenpeace
to the
Committee on Agriculture, Nutrition and Forestry
U.S. Senate

March 28, 1990

Greenpeace would like to thank the Senate Committee on Agriculture, Forestry and Nutrition for the opportunity to state our support of S. 2227, the Pesticide Export Reform Act of 1990. This bill represents a comprehensive and logical way to solve the "Circle of Poison," which threatens the environment and health of citizens in the U.S. and our trading partners abroad.

We also would like to submit for the record letters of support for the legislation from organizations in Australia and Malaysia, both of which are trying to get increased controls on the use of pesticides in their countries, including those that are U.S.-made. A third letter is from David Weir, author of the two books analyzing the international pesticide industry and the role of U.S. firms - "Circle of Poison," and "The Bhopal Syndrome." Also enclosed for the record is an article on the environmental harm caused by pesticide use in Bangladesh, some of which are banned or severely restricted in the United States.

## I. BACKGROUND

By way of background, the "Circle" begins at the site of production where millions of pounds of toxic chemicals are discharged into our air and water every year during the manufacturing process. It then extends to the country of use, where pesticides threaten the health and safety of untrained and unprotected workers. Most pesticide poisonings occur in developing countries where workers lack proper training and access to even the most rudimentary protective equipment. At least 1 million acute poisonings and 20,000 deaths are estimated to occur each year from exposure to pesticides.

The "Circle" is completed when harmful pesticide residues come home to American dinner tables on imported food. While testing at the borders is designed to protect consumers from illegal residues in food, only about 1-2 percent of imported food shipments are actually tested. Moreover, not all pesticides can be, or are, tested for by federal authorities in charge of compliance monitoring. Residue tests exist for only about 50 percent of all pesticides. Few pesticides which are made and exported in the U.S. yet never-registered for domestic use are actually tested for. This is a serious problem since the U.S. is one of the largest pesticide producer and exporter nations worldwide. Every year, U.S. chemical manufacturers export approximately 400 to 600 million pounds of toxic pesticides worth about $4.2 billion. Between 1982 and 1986, the U.S. exported its pesticides to at least 144 countries.

A loophole in the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) allows U.S. manufacturers to produce and export pesticides after they have been banned for use in this country due to their environmental or health impacts. Pesticides never registered for domestic use also are allowed to be exported despite a lack of data critical for determining potential environmental and health risks. (See "Domestic Ramifications" below). About 25 percent of the pesticides exported in 1987 had never been registered for use with the Environmental Protection Agency (EPA), the federal agency in charge of pesticide registration.

Unregistered pesticides aren't the only troublesome pesticides being exported from the U.S. Other exported pesticides include those considered particularly hazardous by EPA and the World Health Organization. These pesticides, many of which require special protective clothing and handling under U.S. regulations, are routinely shipped to countries which, for regulatory, economic and other reasons often cannot comply with minimum health or environmental standards.

The threat of exposure to residues of the U.S.'s own banned pesticides returning on imported foods is likely to increase in upcoming years. This is a result of the accelerated re-registration procedures established in 1988 which will likely result in the cancellation of more pesticide registrations. Under current law, manufacturers are free to continue marketing these canceled products overseas where there are fewer registration requirements.

Overall, while the loophole benefits the pesticide industry by providing lucrative markets without the cost of domestic registration, it undermines the intent of FIFRA which is to protect public health and the environment from undue exposure to toxic pesticides.

S. 2227 is the right way to address the Circle of Poison problem - - at the source. This is the only rational way to approach such a threatening situation.

Below, we would like to outline the registration, production, use and consumption problems we are concerned about, thus demonstrating in-depth the need for S. 2227.

## II. WHICH PESTICIDES ARE BEING EXPORTED?

The pesticides that are exported fall into four basic categories: canceled/suspended (banned), never-registered, particularly hazardous or "general use." While all pesticides are toxic by definition, the first three categories pose particularly great threats to humans and the environment, and thus will be the focus of this review. In all cases, we provide the numbers of pesticides in each category when known. However, because of the lack of attention paid by authorities at EPA over the years, exact figures for each of these categories cannot always be determined.

### A. Unregistered Pesticides:

This category is made up of three sub-categories of pesticides. First, those that once were registered and have had their registrations canceled. Second, those that have never been registered for domestic use but are produced for export only. Third, those pesticides that are "similar in composition and use" to registered products. With the exception of the third category, unregistered pesticides are subject to export notification procedures. (See Section IV below).

Numerous pesticides have been taken off the U.S. market completely. In some cases the action was voluntary on the part of a manufacturer or as the result of a federal action based on concerns over toxicity or environmental impact. There are approximately 52 pesticides in this category, including aldrin, dieldrin, dinoseb and DBCP. Few of these, however, are still being produced domestically.

The second category consists of those pesticides that are manufactured in the U.S. for export only and have never been registered for domestic use. If no domestic registration is intended, manufacturers do not have to conduct any public health or environmental fate studies. Nor does EPA review studies a company may conduct to meet the registration requirements of another country. For example, EPA started to review the toxicity of Monsanto's butachlor (Machete) when the company was interested in domestic registration. Studies conducted by Monsanto after the company decided not to pursue its application for registration have not been reviewed, despite the fact that the product showed evidence of causing tumors and a variety of other health problems in lab animals.

For those never-registered pesticides for which a manufacturer has applied to EPA for a registration for a tolerance, but the request has not yet been granted, the jury remains out. The studies have not been thoroughly reviewed by EPA, data needed to make a final toxicity determination remains outstanding, or the Agency simply has not yet made a toxicity determination. Examples of these such pesticides include the herbicide haloxyfop-methyl (Gallant, by Dow) and the fungicide nuarimol (Gauntlet, by

Elanco).

In other cases, the unregistered pesticide is a "Me-too", or one which is "similar in composition and use" to one that is registered for domestic use, yet contains a different amount of the active ingredient (the product that actually kills the pest) or a different combination of inert ingredients (carrying agents) in the formulation. The difference in the composition and concentrations of formulation ingredients can alter markedly the potential hazard of the product.

Despite the differences in toxicity as determined by the composition of the "Me-Too" product, EPA has no policy defining what the word "similar," in the phrase "similar in composition and use" means. Rather, in the absence of a definition, it allows the regulated industry, the pesticide manufacturer, to police itself and establish its own definition.

Since EPA does not require or review health and safety studies of "for export only " pesticides, manufacturers have been able to represent their products as "safe" without providing evidence. However, when one looks behind the scenes at research on the pesticides that is available, we see that Machete is able to cause skin sensitization, decreased body weights, organ weight changes (liver and kidney) reduced brain size, and tumors in tissues of lab animals. We also see that EPA considers Gallant "a possible human carcinogen" and has concerns about Gauntlet's potential to cause cancer and birth defects in lab animals, a common problem with fungicides.

## B. Pesticides Whose Agricultural Uses Have Been Canceled:

A separate category is made up of those pesticides whose agricultural uses have been banned in the U.S. because of health and/or environmental concerns. Because of the FIFRA loophole, they can be exported and used on crops for international markets.

Examples of these pesticides include daminozide (Alar), chlordane and heptachlor. Although EPA halted chlordane for use on food crops in 1978 because of the threat it posed to humans and the environment, beef and a variety of fruits and vegetables imported in 1989 contained residues of the chemical. Uniroyal has publicly stated that it will no longer export Alar for food uses, yet acknowledges that it cannot control all ultimate use.

## C. Particularly Hazardous Pesticides:

The remaining 75% of exported pesticides includes those which are regarded as particularly hazardous for a variety of reasons, as well as general use pesticides. As noted above, this testimony will not focus on the general use pesticides.

Many of the particularly hazardous pesticides are included on national and international lists of products that pose serious health and environmental threats. These include pesticides which are on the United Nations' World Health Organization's list of 61 "Class 1a" extremely hazardous, and 93 "Class 1b" highly hazardous pesticides. U.S.-manufactured pesticides on the WHO list include aldicarb ("Temik" by Rhone-Poulenc) and dichlorvos (by Amvac).

Other pesticides in particularly hazardous category are the 93 "restricted use" pesticides. These pose such a risk to applicators or the environment that their use in the U.S. is restricted to trained, certified applicators who are required to follow special application precautions. Precautions include the use of protective clothing, application only in specific regions or other restrictions. U.S.-made, and -exported, restricted use pesticides include methamidophos (by Mobay), mevinphos (by Amvac/DuPont) and picloram (by Dow Chemical).

U.S. manufacturers also export pesticides which are the subject of "special reviews" by EPA or actions by the Agency to cancel their U.S. registrations. Examples of pesticides exported in 1989 while undergoing special review to determine whether their use poses "an unreasonable risk" include aldicarb (by Rhone-Poulenc) and carbofuran (by FMC).

## III. DOMESTIC RAMIFICATIONS OF THE CIRCLE OF POISON

As mentioned above, FIFRA's export loophole permits the contamination of people and the environment from the cradle to the grave - or from production to overseas use and subsequent consumption on imported foods. Below is a brief overview of some of the problems resulting from this loophole, with a particular focus on never-registered pesticides.

The problems begin with the statute. FIFRA only concerns itself with "use" issues, ignoring problems stemming from production. These problems, such as worker exposure, or environmental discharges, are supposedly covered by other statues such as the Occupation Safety and Health Act (OSHA) and the Clean Water Act. However, when it comes to the never-registered pesticides, these statutes fail miserably in their duty to protect humans and the environment.

Indeed, little protection is provided to workers, the surrounding community or the environment during the production of never-registered pesticides made only for export.

For example, the FIFRA loophole exempts manufacturers of these products from conducting studies concerning potential environmental and health threats from exposure to the pesticides. (They would have to conduct these studies if they were to apply for U.S. registration under FIFRA.) The Toxic Substances Control Act (TSCA) does not regulate pesticides at all, so the never-registereds are literally "orphans." As a result, no one is able to determine the potential threat from exposure to these products.

Moreover, federal or state agencies need not develop environmental controls for unregistered pesticides before they can be produced or their waste products discharged. For example, under the federal Clean Water Act, states determine whether companies can discharge production waste into water bodies Discharge of never-registered pesticides is permitted despite the fact that toxicity data does not exist, is incomplete, or has not been reviewed thoroughly.

As a result of this loophole, the state of Iowa allows Monsanto to discharge approximately 400 pounds per year of butachlor (Machete) from its Muscatine production plant, yet there is little data to determine whether this is a dangerous amount since, as discussed above, the data does not have to be provided to EPA if domestic registration is not intended. Michigan has developed no limits for the amount of the herbicide haloxyfop-methyl (Gallant) that can be discharged from the Dow Chemical production plant in Midland. Nor has Indiana developed limits for discharges of DowElanco's fungicide nuarimol (Gauntlet) from the plant in Indianapolis.

## IV. INTERNATIONAL PROBLEMS STEMMING FROM U.S. EXPORT LAW

### A. Notification Schemes

The U.S. is the only country in the world to require notification to other countries when an unregistered pesticide is exported, or when the registration of a pesticide becomes effective or is canceled. These notices are intended to provide vital information to importing countries which they can use to make an informed decision of whether to allow the use of a particular pesticide or whether use restrictions are needed.

Unfortunately, these notification schemes are severely watered down and even ignored by EPA, and industry is left to regulate itself. This lack of support for the intent of the legislation renders the precedent-setting notification procedures essentially useless.

EPA recently proposed to strengthen the information exchange process which goes hand in hand with pesticide exports. However, the simple fact remains that pesticides too dangerous for domestic use would still be exported with no U.S. controls.

### 1. Export Notification:

Under FIFRA Section 17(a)(2), manufacturers are to send notices of an export to their foreign purchasers, notifying them that the product is not registered in the U.S. The purchasers must return an acknowledgement statement to the exporting company, which passes it on to EPA. At this point, EPA notifies the importing government of the export.

Since this provision only pertains to unregistered pesticides, several categories of toxic pesticides are not included in the scheme. One category is those pesticides for which most, yet not all, uses have been canceled. This includes pesticides such as chlordane and heptachlor. Another category is the "Me-Too" pesticides. EPA's 1980 policy effectively exempts manufacturers of "Me-Too's" from providing export notification letters despite the fact that the toxicity of different formulations can be radically different from, and pose different risks than, the product registered for use in the United States. Lastly, no notices need be send for the export of any of the "particularly hazardous pesticides" described above.

Even were more pesticides to be covered under the export notification requirement, the system currently is not effective. One review shows that notices of the export of a product may not get to the appropriate government official until weeks or months after the product has arrived and been distributed.

### 2. Regulatory Action Notification:

EPA is also required under FIFRA Section 17(b) to send notices to foreign governments when important regulatory actions occur. International governments, especially those with limited resources, rely on these notices to alert them to possible hazards. However, a 1989 General Accounting Office report found that, out of four pesticides voluntarily canceled because of health or environmental concerns, only one notice was actually sent.

Since regulatory actions often set precedents for actions taken in other countries, failure to notify those countries could mean that they will not reexamine a particular pesticide's regulatory status, or, if in the process of reviewing it, will not have the high quality analysis EPA can generate. Especially when EPA's regulatory action concerns worker exposure or dietary threats, EPA compliance with the law could help reduce poisonings in the user country and dangerous residues on exported foods.

### B. International Use:

As has been seen, not only is the notification process severely flawed, but there are no other kinds of export controls which would halt the export of dangerous pesticides or determine where they may be sent.

The lack of export controls contributes in part to the problem of pesticide poisonings and deaths. About 1 million unintentional poisonings occur every year in the Third World due to pesticide exposure, with approximately 20,000 pesticide-induced deaths.

This lack of controls is apparent in a number of ways. For example:

- pesticides whose agricultural use is prohibited in the U.S. are exported for agricultural use overseas. The continued use of chlordane and heptachlor has resulted in the contamination of breast milk, food items and wildlife species in Australia and other countries around the world.
- labels on exported pesticides do not have to carry use restrictions are intended to avert poisonings and misuse.
- there is little EPA oversight as to compliance with other label requirements. Recent investigations conducted by EPA to determine the extent of compliance with regulations after years of non-oversight resulted in EPA filing civil suits and levying fines amounting to almost three million dollars against eight manufacturers/exporters for failure to comply with requirements that the labels be bilingual, state that the product is not registered for use in the U.S. and be similar in composition and use to U.S.-registered pesticides. Chevron, Dow Chemical, Exxon Chemical, Mobay, Monsanto, Rohm and Haas, Sandoz and Shield-Brite are the defendants in EPA's suits.
- pesticides are sent to countries with no ability to regulate them, as they have no pesticide control legislation in place. In 1986, there were approximately 50 such countries including the Republic of Guinea, Jamaica, Mali and Niger. Other importing countries have legislation, but little or no training for farmers, applicators or dealers, medical facilities for poisonings, or environmental and food residue monitoring.
- U.S. companies advertise their products in ways contrary to voluntary restrictions advised by the United Nation's Food and Agriculture Organization's "Code of Conduct on the Distribution and Use of Pesticides." The labels on a package of the DuPont fungicide, Benlate (benomyl), marketed in Papua New Guinea, contained advertisements for other products sold by the distributor, rather than any warnings or use directions. Such labelling is contrary to provisions of Article 10 of the Code ("Labelling, Packaging, Storage and Disposal") which call for warnings, precautions, toxicity classification and use instructions to be written on the label.
- pesticides for which protective clothing is required for domestic use are exported to countries in which workers cannot afford the clothing, or the climate is inappropriate (eg. use of rubber clothing in hot and/or humid climates).

## V. THREAT FROM IMPORTED FOOD TO U.S. CONSUMERS

Pesticides unregistered for use in the U.S. will eventually come back to haunt us as residues on imported foods. This is because of inadequacies in our imported food testing program and lack of EPA action to rescind food tolerances (residue limits) of banned pesticides.

### A. Inadequate Testing at the Border:

Despite efforts by the Food and Drug Administration (FDA) to protect consumers from illegal residues on fruits and vegetables, only 1-2% of imported produce shipments actually are checked at the border. No such monitoring figure is available for the amount of imported meats, poultry and eggs inspected by the U.S. Department of Agriculture (USDA).

In several cases, the agencies do not test for U.S. pesticides on foods. USDA, for example, does not test for Dow Chemical's haloxyfop-methyl, despite the fact that the systemic herbicide is widely used internationally on commodities which can be fed to animals, such as apples and soy, and in pastures. Even Dow is concerned about the potential for residues of its pesticide in animal products - in 1985, the company applied for a tolerance in eggs, kidneys, meats and poultry.

Even if the federal agencies can test for the products, in some cases, they simply don't. For example, although FDA is able to test for Monsanto's butachlor (Machete), it hasn't tested for the product for at least the last three years. When the Agency finally tests, it usually finds residues. The Agency only tested two times during that period for another pesticide, Mobay's prothiophos (Tokuthion), and found it once on mustard greens from Thailand.

Testing results from imported food that is sampled show an alarming frequency of pesticides that pose particular health concerns. FDA samples taken in 1988 and 1989 frequently showed residues of heptachlor and chlordane, banned since 1978 in agriculture, on imported carrots, pineapples, parsley, garbanzo beans, squash, meats (beef and fish) and cheeses (Edam, Provalone, cured and sheep).

One particularly hazardous pesticide, methamidophos (by Mobay), was frequently detected in 1988 on imported produce such as chinese peas, snow peas and beans, for which no food residue standard, or "tolerance" had been established.

Not only is testing inadequate, but a test method does not even have to exist before manufacturers can export their pesticides. This obviously makes a mockery of the historical reliance by government and industry on border controls to detect contaminated foods.

### B. Delayed Tolerance Revocation:

Not only do testing techniques not have to be in place before a pesticide can be exported. Manufacturers also do not have to have tolerances in place prior to being able to export. This is in marked contrast to U.S. law which prohibits the domestic use of a pesticide on an agricultural commodity unless a tolerance has been established under the Federal Food, Drug and Cosmetic Act. Tolerances enable officials to determine whether the residues on foods are within established limits and whether that product is allowed to be used on the commodity at all.

It is ironic that federal law allows farmers in other countries to use pesticides whose uses have been canceled in the United States. Although U.S. farmers are no longer able to use a product, EPA does not have to act immediately to cancel all tolerances for the banned product.

Indeed, despite a 1982 EPA policy stating that tolerances of a cancelled product are "no longer justified and logically should be revoked," the Agency has permitted the tolerances for several banned pesticides to remain on the books for years after the products have come off the U.S. market.

For example, in the case of heptachlor, EPA took 11 years, from 1978 to 1989, to cancel the product's food tolerances. The Agency took 14 years to cancel the tolerances for DDT and almost 5 years to cancel tolerances for DBCP. So long as there is a tolerance on the books, imported food contaminated with our own banned pesticides can continue to be legally imported and consumer safety is threatened.

## VI. CONCLUSION

Overall, the export controls in this nation's pesticide law are fully and dangerously inadequate. They protect neither worker and public health nor the environment both in the U.S. and overseas from the toxic effects of exported pesticides.

Ten years after Congress last updated FIFRA to provide minimal export controls, the Act needs a drastic overhaul to make these controls equal to those in place for domestic use pesticides. It also needs to level the playing field for U.S. farmers who, for valid reasons, cannot use a product which is shipped to their competitors for use.

IOCU

**International Organization of Consumers Unions**
**Regional Office for Asia and the Pacific**
P.O. Box 1045, 10830 Penang, Malaysia • Phone: (60-4) 371396
Cable: Interocu Penang • Telex: MA 40164 APIOCU • Fax: (60-4) 366506

Senator Patrick Leahy
Chair
Committee on Agriculture,
Nutrition and Forestry
U.S. Senate
Washington, D.C. 20510
U.S.A.

27 March 1990

Dear Senator Leahy

Re: Senate Bill (S 2227) and the House of Representative Bill (H.R. 4219)
on "the Pesticide Export Reform Act of 1990".

The International Organization of Consumers Unions Regional Office for Asia and the Pacific (IOCU ROAP) which is the Pesticide Action Network (PAN) Coordinating Centre for Asia and the Pacific representing the interest of more than 200 public-interest groups in the region, would like to commend the Senate Agriculture Committee for introducing the above Bill which will be an essential safeguard to human health and the environment caused by the dumping and haphazard use of pesticides here.

Through PAN's monitoring we were able to document the problems with the use of pesticides in Asia and the Pacific.

Often pesticides such as aldicarb, monocrotophos, methamidophos, paraquat and methyl parathion are sprayed by workers and farmers without any protective clothings. Even when protective clothings are available their use is uncomfortable in tropical climates. Surveys have shown the use of leaking spray equipment and lack of training and awareness among farmers, workers and users about the pesticides they are handling. Pesticide poisoning is prevalent. Official figures quote about 276 people being poisoned in 1986 in Malaysia. But it is widely accepted that pesticide poisoning figures understate the actual numbers because record-keeping is poor and because neither victims nor medical personnel are trained to recognise the connection between symptoms and exposure.

Food and the environment are contaminated. Maize contaminated by methamidophos poisoned 26 people in 1986. Recently, vegetables in Malaysia were found to contain high residues of EDBC.

In addition, advertisements by companies provide an impression that pesticides are safe to handle and use. For example, the calender by Dupont in 1987 advertising Lannate, Vydate, Londax, Benlate, Manzate 200, Delsene MX-200 and Benlate T-20/20 w, depicted a women spraying without protective equipment. And words such as "use is safe" are still used in ads, eg. a Furadan 3G (Carbofuran) ad in the Philippines claims its use is safe.

Pesticide containers are reused for storing water and food. Leaking and poorly labelled pesticide bottles are sold.

.... 2/

Although many Asian countries have good legislation, most countries lack the resources to enforce the regulations properly, and thus the use of hazardous pesticides continue. For example, in Malaysia monocrotophos is only allowed for oil palm trunk injections but they continue to be sprayed by rice farmers in the country. Arsenic trioxide banned in Thailand is still available over the counter for household termite control. Aldicarb (Temik) and Carbofuran (Furadan) restricted in the US are available in tiny, unlabelled polyethylene bags in Indonesia and farmers sprinkle them on their crops.

To help governments control hazardous pesticides that enter their borders, the principle of "Prior Informed Consent" (PIC) was initiated both at FAO and UNEP.

With the adoption of PIC at FAO and UNEP, Malaysia has initiated a discussion with various government departments, industries and public interest groups on its implementation in the country. This is a positive response from one Asian country to try and control chemicals including pesticides that are being imported and exported from this country.

Thus the proposed US controls on pesticides exports would not only be an admirable example to the rest of the world but more importantly it will help curtail some of the pesticide problems discussed above. Moreover such a measure will help public-interest groups and consumers in their fight to introduce better pesticide legislation and enforcement in their countries.

We thus urge you to do everything in your power to ensure that Third World consumers receive the same protection that US consumers have come to expect.

Thank you

Yours sincerely

Sarojini Rengam (Ms)
Pesticide Campaign Coordinator

SR/rs

1045 Sansome Street, Suite 110
San Francisco, CA 94105

March 26, 1990

Senator Patrick Leahy
Chair, Committee on Agricuture, Nutrition, and Forestry
United States Senate
Washington, D.C. 20510

Dear Senator Leahy:

Thank you for co-sponsoring S-2227, the Pesticide Export Reform Act, which addresses many of the issues I have been writing about for the past 20 years, in articles and in my books, CIRCLE OF POISON, and THE BHOPAL SYNDROME.

Your bill is the first serious attempt to close the FIFRA loophole that has caused so much suffering and ecological harm around the world. In addition, the bill holds the promise of repairing some of the serious damage done to U.S. foreign relations by our seeming indifference to the health and environmental concerns of people in theunderedeveloped world. By eliminating the current double standard of banning pesticides at home but allowing them for sale as export only, we can provide a rare example of what true political leadership looks like in a world increasingly yearning for that leadership.

There is no more important issue than global environmental decline. Your bill speaks to one apect of that issue -- an aspect I have devoted the better part of my career addressing. I know from experience that you will face the organized opposition of entrenched chemical industry interests, and I hope that you will be able to overcome that opposition to the extent necessary to preserve the regulatory integrity of this bill.

I offer you my support in this effort, and my willingness to participate, should that be useful.

Sincerely,

David Weir
Author, CIRCLE OF POISON, THE BHOPAL SYNDROME
President, CENTER FOR INVESTIGATIVE REPORTING
Lecturer, UNIVERSITY OF CALIFORNIA
SENIOR EDITOR, CALIFORNIA MAGAZINE

Copyright (c) 1990 Inter Press Service:
Inter Press Service

March 20, 1990, Tuesday

HEADLINE: BANGLADESH: COMMITTING ECOLOGICAL SUICIDE WITH PESTICIDE

BYLINE: by Tabibul Islam

DATELINE: DHAKA, March 20

To feed its rapidly-increasing population, Bangladesh is trying to boost harvests by spraying pesticides on its fields, but the practice has unleashed a chain reaction of harmful side-effects.

- Fishermen are going hungry in eight districts in northern Bangladesh because pesticides have killed off fish.

- Chemicals sprayed into jute and rice fields are finding their way into the food chain, posing an undetermined long-term health hazard.

- Thousands of Bangladeshi farmers are poisoned every year because they mishandle the dangerous chemicals. The number of young Bangladeshis committing suicide by consuming pesticides is going up.

In 1971, Bangladesh imported 100 tons of pesticides. By 1988, this figure had shot up to 3,100 tons.

The impoverished country spends $8 million to import pesticides every year, and most of the trade is handled by nine transnational companies.

An epidemic of a contagious ulcer caused by pesticide poisoning has killed off millions of dollars worth of fresh-water fish in northern Bangladesh over the last two years, affecting eight northern districts.

Reports from the affected districts including Jessore, Rangpur, Rajshahi, Dinapur and Khulna district say thousands of fishermen have lost their means of livelihood.

Scientists say that compared to the size of Bangladesh's population, the use of pesticides is still low. But its use is unregulated, and the long-term effect on public health because of chemical residues in food and the resistance to them by pests has not been carefully studied.

Compounding the problem is that most peasants are illiterate and do not follow the instructions for use. Highly toxic pesticides, some of them banned in the West, are often sold in grocery stores.

Scientists at a research station in Dhaka say the indiscriminate use of the chemicals has made organisms immune to pesticides. One study showed that the number of resistant organisms harmful to crops has doubled since 1965.

But agricultural experts say pesticides are needed because various harmful micro-organisms, insects and others pests cause huge losses every year.

One estimate showed that the pests destroy 1.4 million tons of rice, one million tons of sugarcane, 200,000 tons of wheat and other valuable cash crops worth $600 million every year.

Local laws here lay strict guidelines about the use and sale of pesticides, and follow the standards laid down by the U.N. Food and Agriculture Organization (FAO).

The import, repacking, and sale of pesticides need to be registered, requiring recommendations by committees of experts.

But officials say the registration laws have not been strictly enforced because of the lack of training, scant laboratory facilities and field research stations.

Marketing agencies are also required to train farmers on the proper use of pesticides. Leaflets and posters illustrate the harmful effects of the chemicals.

But most companies do not comply, and even for those who do the message is largely lost because most farmers cannot read.

At a seminar here this month, scientists looked into various alternatives to pesticides, including integrated pest control of rice fields, and use of more environment-friendly methods of pest control.

One impact of the use of pesticides is that the frog population is going down because the chemicals have killed off the insects the amphibians feed on. Experts say the frogs eat many harmful insects, and play the role of insecticides.

The depletion in the frog population also means the country loses valuable revenue from export of frog legs. Scientists now want the government to ban the export of frog legs altogether.

They told government officials at the seminar the country should control the spread of pesticide use before it is too late.

GREENPEACE ACTION

1436 U Street, NW
Suite 201-A
Washington, DC 20009
TEL (202) 462-8817
FAX (202) 462-4507

## Highlights of the
## Pesticide Export Reform Act of 1990

This proposed Act is divided into two parts. The first part, known as Title I, reforms the export provisions of FIFRA. Title II amends the provisions of the Food, Drug and Cosmetic Act, the Federal Meat Inspection Act, the Poultry Products Inspection Act and the Egg Products Inspection Act which regulate the presence of pesticides in imported food.

Title I:

- Bans the export of all unregistered pesticides, including pesticides which were never registered, and pesticides which have had their registrations canceled, or voluntarily withdrawn.
- Prohibits the export for agricultural use of pesticides that are not registered for agricultural use in the U.S.
- Requires that the governments of importing countries give their "Prior Informed Consent" (PIC) to the export of "particularly hazardous pesticides," including restricted use pesticides, pesticides which are the subject of special review, suspension or cancellation proceedings, or a conditional registration, and pesticides on the World Health Organization's lists of Class IA "extremely hazardous" and Class 1B "Highly Hazardous" pesticides.
- PIC system permits export only to countries which have an effective pesticide regulatory program.
- Makes data submitted to EPA concerning exports, including shipments, available to the public.
- Provides countries with information concerning alternatives to the pesticide (including non-chemical alternatives) before they consent to the importation of the pesticide.
- Allows the temporary export of any pesticide if its use is the only way to halt the spread of a communicable disease that poses a serious threat to public health.
- Limits the export of unregistered experimental pesticides to that amount which is necessary to accumulate the data needed to justify registration. Requires the prior consent of the countries where the experiments would be conducted.

Printed on recycled paper

- Requires worldwide notification every time a new registration of a pesticide is granted, or that the regulatory status of an existing registration is changed, such as being made conditional, classified for restricted use, canceled, suspended, or voluntarily withdrawn. Information on alternatives (including non-chemical) to the pesticide in question must accompany this notice.

- Requires EPA to initiate the development and implementation of international pesticide regulatory programs and research into alternative agriculture.

- Requires EPA to work with other federal agencies to develop and implement effective programs to monitor and control pesticide residues on food imported into the United States.

Title II:

- Automatically revokes tolerances for pesticide residues in food for pesticides which are no longer registered for use on those food items.

- Requires that, when EPA establishes a tolerance level for pesticides in food, EPA must consider the effect of those pesticide residues on the people who consume that food the most or who are particularly vulnerable to the pesticide's effects (e.g. children, the elderly, particular ethnic groups).

- Prohibits EPA from establishing tolerances for pesticides in food if there is no practical testing method available for that pesticide in food.

- Requires that the names of pesticides used on imported food be including in shipping documents which accompany that food. This will assist those agencies which monitor pesticide residues in food to target their testing programs more effectively. The Act imposes penalties on importers who do no comply with this requirement.

STATEMENT OF

FRANK S. BOUIS

PRESIDENT

FLORIDA FRUIT & VEGETABLE ASSOCIATION

P. O. BOX 140155

ORLANDO, FLORIDA 32814-0155

(407) 894-1351

BEFORE THE

U.S. SENATE
COMMITTEE ON AGRICULTURE,
NUTRITION AND FORESTRY

CONCERNING

SENATE BILL 2227
PESTICIDE EXPORT REFORM ACT OF 1990

TO AMEND THE FEDERAL INSECTICIDE, FUNGICIDE, AND
RODENTICIDE ACT TO REFORM THE PROVISIONS OF SUCH ACT
GOVERNING EXPORTED PESTICIDES, AND FOR OTHER PURPOSES

## Introduction

Mr. Chairman, thank you for giving me an opportunity to appear today on behalf of the Florida Fruit & Vegetable Association to discuss the concepts expressed in Title II of Senate Bill 2227. With me is John Himmelberg of Holland & Knight, our Washington counsel.

FFVA is a non-profit agricultural trade association, which represents growers of fresh vegetables, tropical fruits, and citrus in Florida. The Association deals with public and private agencies to aid in the recognition and solution of our growers' concerns.

## Summary of Position

Mr. Chairman, we are very supportive of your efforts to even the playing field for domestic producers of fruits and vegetables. We are farmers and consumers of fruits and vegetables and we have seen more and more of the U.S. supply of fruits and vegetables being imported. We view this as disadvantageous to the consumer and the economy. Imported food does not have the same food safety protection as domestically produced food. American farmers are increasingly at a competitive disadvantage to those abroad. Total per capita availability of fruits and vegetables is not increasing even though we know more fruits and vegetables in the American diet means a healthier America.

One of the issues we watch with increasing concern is governmental action that places an economic burden on fruit and vegetable producers which results in decreased production. For example, several years ago EPA decided to eliminate the use of ethylene dibromide (EDB) on many commodities including fruits and vegetables. Eventually, all uses were prohibited but a tolerance remained for several years which allowed foreign producers to use EDB and ship mangos into the United States while U.S. mango producers could not use EDB at all and thus were excluded from some U.S. markets. This kind of unfair governmental action harms domestic producers and, at least, theoretically, consumers who may be in fact consuming residues of cancelled or suspended pesticides.

Mr. Chairman, when you introduced Senate Bill 2227 you spoke of the circle of poison eventually reaching our consumers. Neither consumers, nor FDA, can regulate use of illegal pesticides abroad or detect illegal residues at a glance. FFVA has supported federal country of origin labeling legislation without success. This would at least give consumers the choice between wholesome domestic produce and foreign-grown produce. We still think it is time to pass such legislation. The states of Florida and Maine have a country of origin labeling law.

To the extent that Senate Bill 2227 attempts to level the playing field between domestic and foreign producers when registrations of pesticide uses are cancelled in this country, by providing an orderly process for revoking the tolerances for such uses and forbidding imports of food treated with such pesticides into this country, we commend you.

We support providing a better system to assure that food coming into this country is safe and does not contain residues of pesticides which present significant health risks.

We are also encouraged by the bill's efforts to elicit cooperation with other countries and international organizations because we think such an effort is essential to obtaining the data necessary to support rational decisions with respect to pesticides and food safety in the future. Our Association is now in negotiation with AID and is actively supporting an effort to get a cooperative group of fruit and vegetable producers of the U.S. and CBI countries to work toward this end. The idea is to jointly compile the existing data and develop needed data on fruit and vegetable production and food safety.

Mr. Chairman, over the last few years we have seen the proliferation of legislation and regulation designed to solve many problems especially safety and environmental ones. We believe these have had unpredictable effects on the domestic fruit and vegetable industry, effects that really are not wanted by most Americans. Last week the House Agriculture Domestic Marketing, Consumer Relations and Nutrition subcommittee unanimously passed an amendment to the Farm Bill (H.R. 3950) recognizing the dilemma and ordering a study of the problem. I hope you will be supportive when it reaches this committee.

Mr. Chairman, I am not a technician. However, we have on our staff Environmental and Pest Management Experts. We will be glad to make our FFVA staff available upon request either in person, by telephone, or by letter.

## TESTIMONY OF
## JAY J. VROOM, PRESIDENT
## NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION
## BEFORE THE
## COMMITTEE ON AGRICULTURE, NUTRITION AND FORESTRY
## UNITED STATES SENATE

**March 28, 1990**

Mr. Chairman, I am grateful for the opportunity to testify today on S.2227, the "Pesticide Export Reform Act of 1990."

We share your commitment, Mr. Chairman, to assuring appropriate regulation of pesticide exports and residues on imported food--regulations that both recognize the critical role of crop protection products worldwide and the high degree of public health and environmental protection that all of us demand and deserve. While your bill addresses many of the complex issues involved in international trade in pesticides, we believe that there are better ways than those proposed in S. 2227 to accomplish the objectives we agree upon.

Before commenting specifically on your bill, I want to recognize the work of Linda Fisher and her colleagues at EPA in their on-going efforts to reexamine and improve information exchange with other governments and end-users on U.S. pesticide regulation and exports. Their recently-proposed policy revision on FIFRA Section 17 mirrors many of the concerns addressed in your bill. We believe satisfactory implementation of EPA's authority through regulatory reform similar to those changes currently proposed is a better way than new legislation. EPA just initiated its review and we should give that process a chance to work.

Like you, Mr. Chairman, we too are concerned about reports of pesticides used improperly abroad and public apprehension about pesticide residues on imported food. My industry has consistently supported tough measures to improve the capability of foreign governments to regulate pesticides responsibly. Effective regulation in every nation where pesticides are sold and used is the surest way to protect the world environment and human health everywhere.

An example of NACA's commitment is the visit we sponsored in 1989 for officials of the government of Korea to come to the U.S. and learn first-hand about pesticide regulation and safety practices. Our objective was to have Korea consider adopting standards and practices like those of this country.

With reference to your bill, S. 2227 addresses two major objectives which we support. They are: First: Protecting the health of farmers and consumers in other countries to which we export pesticides, and Second: Ensuring that imported food meets

U.S. standards of safety and that U.S. farmers are able to compete with others on a level playing field. We believe that these objectives can be achieved without corresponding injury to U.S. agricultural trade.

Turning to the important subject of U.S. exports of pesticides, let me first make several factual points.

The United States is only one of many countries which manufacture pesticides. In fact, we are a relatively small player. Throughout the developed world--Europe, Japan, Australia, and Canada, to name a few--there are large companies manufacturing and exporting a wide range of pesticides. Moreover, many newly industrialized and even developing countries have sophisticated chemical manufacturing capabilities. Countries like Taiwan, Korea, Brazil, Mexico and India produce substantial quantities of pesticides and sell them throughout the world. It should be noted that many pesticides of most concern are manufactured in those countries. For example, DDT and BHC (benzene hexachloride) are made in India, BHC in Brazil and People's Republic of China, and Captafol and EPN in Korea. No controls on U.S. exports will change or regulate this trade. Indeed the handicapping of responsible U.S. companies is likely to encourage further development of trade out of these countries.

When it comes to banned or severely restricted pesticides, moreover, we know of no member of NACA that exports them from the U.S. This observation, combined with foreign manufacture, leads to the inescapable conclusion that catchy phrases and easy solutions have little basis in fact and are likely to be counter-productive. This circumstance of aggressive foreign production and trade highlights the need for international cooperation. We recommend that Congress support the international activities of EPA and those of the United Nations' FAO, WHO, and UNEP organizations dealing with pesticide trade information and notification.

Next, it merits noting that S. 2227 does not clearly distinguish between banned and severely restricted pesticides--products which may present significant problems--from pesticides which are merely not registered in the U.S. American companies should not have to spend millions of dollars on securing a domestic registration for a product used on pests or crops which are not present here. There is no reason for this discriminatory treatment as long as these products are registered in countries where they are used. For example, if a company has a product to control brown rice hoppers and has secured a registration in Japan, should there be a penalty for not registering in the U.S. where this insect is not a problem?

Another common example of U.S. export of unregistered products involves products with both a pending U.S. registration and, for example, approval in a European country. Registrations in England, France and Germany are often issued well before an EPA registration and, when granted, U.S. companies naturally want to start selling in those countries. Are exports of U.S.-unregistered products to these countries really a cause for concern?

Current U.S. law, while not perfect, still works. Pesticides must be registered here to be sold here. Some pesticides are not registered in the U.S. for good reason.

Some pesticides are made and exported for pests that do not exist here or for crops that are not grown in the U.S., such as coffee, rubber, cocoa, bananas, and tea. Most U.S. exports, moreover, go to countries with regulatory standards comparable to our own. The absence of a U.S. registration simply does not mean the product is untested or unregulated.

One more factual point: The draconian provisions concerning research and development chemicals in S. 2227 are entirely unjustified. Research chemicals are carefully guarded and handled by the creating companies. These products are their future. The compounds are sent to company-owned and selected outside research facilities around the world for screening, testing and further research by highly qualified scientists under the most careful protocols. The quantities are usually very small.

Your bill's suggestion that his research work represents a threat to the receiving countries is unfounded. The maze of restrictions, paperwork and delay imposed under S. 2227 would likely drive most agrichemical research overseas. It would also have a commensurate cost-increase impact on remaining U.S. research and production that will ultimately be borne by U.S. farmers. A simple fact is this: If U.S. crop protection manufacturers serve a smaller, U.S.-only marketplace, their costs of doing business will be amortized over a smaller customer base. That translates into higher unit costs for American farmers and does not even begin to speak to the dislocation of a research-based industry whose innovation to this point in our history has been the envy of the world. Do we want Europe and Japan to eclipse this country in this critical technology area?

While no doubt well-meaning, unilateral U.S. requirements for blanket U.S. registration of exports, foreign government consent on imports, U.S. lists of approved import countries, and U.S. government audits of foreign countries are, at best, condescending.

The bill's proposed system of an approved list of countries, whose laws and practices are audited, will likely be very offensive to our trading partners. Countries that are found not acceptable are effectively blacklisted. So far these are: Mexico, Israel, Egypt, India, New Zealand, Brazil, and many more. Penalizing countries for not adopting U.S. laws and practices may well provoke reciprocal trade barriers. If we blacklist countries who reach different scientific and regulatory judgments than we do, America and its huge agricultural exports will be at a great risk to initiating a potential trade war.

We fully support existing U.S. efforts to provide meaningful information to other countries about significant U.S. regulatory actions--principally focused upon cancellation, suspension, new registrations and tolerances, and denials for health and environmental reasons. However, we should recognize pragmatic limits on the reach of U.S. law to impose comparable limitations on use of pesticides in other countries. Other countries are equally justified and able to make their own judgments on the risks and benefits of pesticides and how those judgments are communicated to the world. We should not put our country in the position of exercising "environmental imperialism."

We support the concept of prior informed consent before pesticides are exported, as recently incorporated in the United Nations Food and Agriculture Organization (FAO) International Code of Conduct on the Distribution and Use of Pesticides. If one fears that some countries may not be as sensitive to environmental concerns and fair trade as others, should S. 2227 become law, companies manufacturing in and/or exporting pesticides to those countries will have even more latitude to operate unfettered. Unilateral and indiscriminate restrictions on U.S. trade are not the answer. Such an unfortunate result would be detrimental to both U.S. trade and the world environment and health.

Regarding Title II of your bill, Mr. Chairman, we share your view that all food sold in the U.S.--whether grown here or abroad--must meet tough U.S. tolerances for pesticide residues. This requirement is the baseline of U.S. regulation to ensure both safe food for Americans and a level playing field for U.S. farmers and their foreign competitors that wish to compete for domestic U.S. food trade.

This last point is important. Crippling U.S. pesticide exports will not help U.S. farmers. Foreign agricultural competitors who chose to use pesticides not registered here will still be able to get them from foreign sources. U.S. agriculture's best protection against unfair competition from imported food is an effective residue monitoring program on food imports. FDA must have the level of personnel, skills and equipment necessary to continue to assure that all food sold and consumed here meets U.S. standards.

Finally, while we have a number of other reservations, we are especially concerned about the manner in which your bill proposes to check for pesticide residues on imported food. The bill calls for food importers to identify pesticides known or customarily used by their sources. We question whether this huge paperwork burden--on annual U.S. food imports of 20 million tons--will provide FDA any more reliable information than it has now. There are many skilled international agricultural experts that can provide such information. Requiring use information from thousands of importers is an obvious and unfair barrier to trade.

We fear the impact if these and other requirements in your bill are reciprocally imposed on U.S. food exporters. This legislation may inadvertently encourage non-tariff trade barriers to U.S. agricultural exports at a time when we are trying to eliminate such barriers. This could truly have a very detrimental effect on the nearly $40 billion of U.S. agricultural exports sold last year. You may recall the adverse impact of the EEC's ban on U.S. beef treated with growth hormones as an example of such policy ramifications and their reverberations.

In closing, Mr. Chairman, every measure proposed in S. 2227 and related export bills deserves a full airing. We have many more concerns and information that should be brought to your attention. We hope that the provisions in S. 2227 and other legislation will be evaluated in terms of what is realistically possible in ensuring responsible pesticide use abroad and whether they truly advance our collective efforts to assure an abundant, economical, and safe food supply for all of us.

Thank you for the opportunity to testify. I would be happy to answer your questions.

ATTENTION UNITED STATES SENATE. COMMITTEE ON AGRICULTURE, NUTRITION AND FORESTRY.

RE; THE PESTICIDES EXPORT REFORM ACT 1990

AUSTRALIAN ENVIRONMENT MOVEMENT SUPPORTS WORLD-WIDE BAN

The Total Environment Centre has been campaigning for a world-wide ban on the organochlorine pesticides for over ten years. We have the support of many organisations throughout Australia including Ocean Watch (The Sydney Fish Marketing Authority), the Nursing Mothers Association (a national association of women to promote and protect breastfeeding), the Building Workers Industrial Union (representing workers exposed to chlordane and heptachlor), the Australian Consumers Association (membership 18,000) and Greenpeace Australia.

The Toxic Chemicals Committee of the Total Environment fully supports the proposal of United States Senators to ban the export of pesticides no longer permitted for use in the United States. The Circle of Poison has long reached to our country where regulatory authorities fail to see the economic and environmental consequences of pesticide dumping from abroad.

PESTICIDES OF CONCERN

Those pesticides of greatest concern remain the organochlorine insecticides heptachlor and chlordane which continue to pollute our air,soil, water, food and wildlife. They also contaminate our own bodies because of their persistence in fatty tissue and cellular membranes. Chlordane and heptachlor are used for the control of termites and as a result there are thousands of tonnes dumped into the urban environment each year. The importers and distributors, Velsicol refuse to provide any information on the amount of the poisons they bring to our country and to date have been highly successful in influencing both state and federal regulators to allow the use of their products.

## AUSTRALIAN GOVERNMENT IGNORES HEALTH AND ENVIRONMENTAL PROBLEMS OF CHLORDANE AND HEPTACHOR

Despite the development of practical alternatives to termite control, authorities insist that there is a real need for chlordane and heptachlor and continue to deny any health problems associated with their use. They maintain that these pesticides are not linked in any way to cancer and claim that the United States decision to ban the chemicals was a "political" one, based on unscientific assessment of their chronic toxicity. They deny that chlordane causes cancer in two animal species (rats and mice) and do not entertain any concerns about their risk to the unborne and newborne children via placental transfer or human milk. Velsicol has spent considerable sums of money on an active "education" campaign of our administrators which we in the environment movement cannot match because of limited financial resources.

## OTHER PESTICIDES IN THE CIRCLE OF POISON

There are other pesticides that come to our country via the Circle of Poison. Haloxyfop methyl is registered here by Dow Chemicals. It is aerially sprayed on many crops including pineapples, peanuts, soya beans, field peas, chick peas, lupins, navy beans, rape seed, cotton and sunflowers. Tolerances have been set for all food products listed above. Enquiries to Mr Allan Browning of Dow Chemicals established that the company believes that the pesticide poses no carcinogenic risk, based on animal studies in rats and mice.

The Australian Federal Government does not test for haloxyfop methyl in its routine residue survey, the National Residue Survey which is designed to protect the export market by ensuring that pesticide residues in exported food and fibre products do not exceed tolerance levels. Enquires made at two accredited testing laboratories indicated that haloxyfop methyl is a difficult pesticide to test for and that any surveillance for its presence in food would be time -consuming and expensive. Another pesticide of concern is the Bayer product, prothiofos, trade name Tokuthion. This chemical is registered in five states for use on apples, grapes, beans, kiwi fruit, peanuts, brocolli, kael, potatoes and cotton.

In Australia the public have no access to any of the data submitted by registrants of pesticides and there is very little information in the open literature about these compounds. This means that the environment movement has no way of establishing the risks to the environment and public health posed by pesticides dumped in our country.

Our regulatory authorities maintain that we have an excellent system of assessment and regulation but the reality of the situation is very different. We need the support of the United States Congress to help us reduce the use of poisonous pesticides in our urban and rural environment. We applaud the proposed legislation and ask that it be given support in the Congress.

For Further Information Contact Dr Kate Short, Executive Officer, Toxic Chemicals Committee, Total Environment Centre.

phone
045 682012
02 2478476
FAX 045682015

Kate Short.

27/3/90.

The Pesticides Trust

20 Compton Terrace
London N1 2UN
Tel: 354-3860

23 March 1990

Senator Patrick Leahy
Chair
Committee on Agriculture Nutrition and Forestry
U.S. Senate
Washington DC 20510

Fax to 0101-202-462-4507

Dear Senator Leahy -

Pesticides Export Reform Act 1990

We would be grateful if you would kindly accept this letter as written in support of the above proposal. The Pesticides Trust is a new U.K. charity concerned with the health and environmental implications of pesticides.

The Pesticides Trust, on behalf of the world-wide Pesticides Action Network (PAN) coordinated monitoring and analysis of the enforcement of the FAO Code of Conduct on pesticides in 1989. We produced a report entitled "The FAO Code: Missing Ingredients" on the subject of pesticides that were causing difficulties in the Third World, but which would not be "caught" by PIC procedures. The monitoring exercise was carried out in 17 countries in Asia, Latin America, and Africa.

The strong concern was registered by our participating organisations and by delegates at the FAO Conference in Rome in November 1989 that the availability of hazardous pesticides must be reduced. Notification procedures will assist, but their effectiveness will be greatly increased if they are used in combination with control of exports enacted in the legislation of exporting countries.

We are sure that this proposal will accord with the industry concept of "product stewardship" and will encourage the safe and informed use of pesticides.

We hope our letter is of assistance to the Committee.

Yours faithfully,

Peter Beaumont
Coordinator

Company with charitable status limited by guarantee
Regd office 258 Pentonville Road, London N1. Regd No. 2036915

1045 Sansome Street, Suite 110
San Francisco, CA 94105

March 26, 1990

Senator Patrick Leahy
Chair, Committee on Agricuture, Nutrition, and Forestry
United States Senate
Washington, D.C. 20510

Dear Senator Leahy:

Thank you for co-sponsoring S-2227, the Pesticide Export Reform Act, which addresses many of the issues I have been writing about for the past 20 years, in articles and in my books, CIRCLE OF POISON, and THE BHOPAL SYNDROME.

Your bill is the first serious attempt to close the FIFRA loophole that has caused so much suffering and ecological harm around the world. In addition, the bill holds the promise of repairing some of the serious damage done to U.S. foreign relations by our seeming indifference to the health and environmental concerns of people in theunderedeveloped world. By eliminating the current double standard of banning pesticides at home but allowing them for sale as export only, we can provide a rare example of what true political leadership looks like in a world increasingly yearning for that leadership.

There is no more important issue than global environmental decline. Your bill speaks to one apect of that issue -- an aspect I have devoted the better part of my career addressing. I know from experience that you will face the organized opposition of entrenched chemical industry interests, and I hope that you will be able to overcome that opposition to the extent necessary to preserve the regulatory integrity of this bill.

I offer you my support in this effort, and my willingness to participate, should that be useful.

Sincerely,

David Weir
Author, CIRCLE OF POISON, THE BHOPAL SYNDROME
President, CENTER FOR INVESTIGATIVE REPORTING
Lecturer, UNIVERSITY OF CALIFORNIA
SENIOR EDITOR, CALIFORNIA MAGAZINE

***Householders for Safe Pesticide Use***
***P.O. Box 1309, East Victoria Park, WA 6101, Australia, Tel. (09) 2200652***
25 March 1990

Senator Patrick Leahy, Chair
Committee on Agriculture, Nutrition and Forestry
U.S. Senate, Washington, D. C. 20510

Dear Senator Leahy,

On behalf of our group, please accept our congratulations on the introduction to the United States Legislature of the *Pesticide Export Reform Act of 1990,* legislation which we wholeheartedly support.

*Householders* lobbies for pesticide reform and provides support for victims of pesticide misuse. We have assisted with some changes to the use of organochlorines in Western Australia, of which the most important, perhaps, was the 1988 halting of a compulsory government-run and government-enforced broadscale spraying of much of the State, including private backyards, against Argentine ants, most recently with heptachlor, but prior to that with DDT, dieldrin and chlordane (the spraying has been going on for forty years).

Australia considers itself a developed country, and claims to have public health standards equal to the best in the world. This claim, unfortunately, cannot be sustained in relation to the regulation of pesticides. The 1987 beef residue crisis, in which unacceptably high levels of dieldrin and heptachlor were found in Australian export beef, is one illustration of our backwardness in this area; organochlorine (cyclodiene) pesticides were not withdrawn from agricultural production in Australia until 1987 and only after Australia's trading partners enforced their standards on the Australian export meat industry.

The compulsory Western Australian Argentine ant spraying with heptachlor, still enforced as late as 1988, is another example of lax regulation of a chemical. (Please note that the Western Australian Health Department lobbied for the heptachlor spraying program to continue, claiming the program did not pose any significant health hazard). Eight of the chemicals identified by the Pesticide Action Network (PAN) as the 'dirty dozen' are in use in Australia; many others, banned or restricted in the United States, are available in Australia off supermarket or plant nursery shelves. For example, the extremely toxic phorate (it is more toxic than strychnine) is available to any home gardener; PCP, a dioxin-contaminated organochlorine is still available and used as a herbicide. The lax regulation of cyclodienes used in agriculture, termite control and Argentine Ant control has led to widespread contamination of soil and waterways. A recent scare in which over 50 per cent of Perth (the capital of Western Australia) residents, who tested their backyard eggs, found them to be inedible due to organochlorine contamination, illustrates the magnitude of the problem (see also enclosure). The extent of overexposure of the population in other ways is only beginning to be assessed.

We have no doubt that in time and with the assistance of enlightened politicians and academics and of consumer organisations such as ours, Australia will attain the same public and environmental standards in relation to pesticide use as have other developed countries. However, the social change that has to occur to bring this about is substantial; contrary to Americans, Australians do not have a Bill of Rights, have no Freedom of Information Act of any consequence, cannot take legal action under contingency arrangements and otherwise have legislation that inadequately protects victims of chemical exposure, especially with regard to chemicals from which health effects are delayed or long-term. Our regulatory bureaucracies are handicapped by a tradition of being closely advised by the agri-chemical industry and are loathe to change. For all these and other reasons, it is inevitable that no matter how hard we and many others work to bring about change, if left to its own devices, Australia will continue to overexpose its population and allow the contamination of much of its environment for a long time to come. The *Pesticide Export Reform Act of 1990*, however, if passed, could accelerate the process of change at a substantial savings in ill-health and environmental degradation. We hope that American legislators by passing this legislation will declare themselves not only the guardians of Americans' health and environment but also keepers of their less enlightened Australian brothers.

Yours sincerely,

Naomi Segal          encl.

ELC
International

Environment Liaison Centre (International)
Centre de liaison pour l'environnement (International)
Centro de Enlace para el Medio Ambiente (Internacional)

P.O. Box 72461, Nairobi, Kenya
Tel (254 2) 562015, 562022, 562172, Fax 562175
Telex 23240 ELC KE Cable: ENVICENTRE
Noemi Road, off Ngong Road, Nairobi

Nairobi 26th March, 1990

Senator Patrick Leany,
Chair Committee on Agriculture, Nutrition and Forestry.
U.S. Senate,
Washington, D.C. 20510.

Dear Senator,

THE ENVIRONMENT LIAISON CENTRE INTERNATIONAL (ELCI) is a global coalition of non-governmental organisations working in the field of environment and development. The aim of ELCI is to strengthen the work of NGOs through networking, advocacy and direct support activities.

ELCI is a founding member of the Pesticide Action Network (PAN) and the regional coordinator for Africa. PAN is a worldwide coalition of citizen groups and individuals who are opposed to the overuse and misuse of pesticides and to promote alternatives.

Some pesticides banned or severely restricted in United States like DDT, Aldrin, Lindane, Paraquat are used in most countries in West, Central and East Africa. Hundreds of people are poisoned each year. These countries do not have pesticides law or regulations on the use of pesticides. For example in Cote d'Ivoire, hazardous pesticides like Chlordane or Dieldrin can be imported without restriction and use on the crops.

In East Africa, particularly in Kenya, according to some press reports and our investigations, in the National Hospital, each week about 14 patients are treated because of misuse of pesticides. DDT is still used in Kenya, and Capfactol, a product applied to some 100,000 hectares of coffee at the rate of 4.4 kg per hectare eight times a season is a well known cause for concern.

Global Coalition for Environment and Development
Coalition mondiale pour l'environnement et le développement
Coalicion Mundial para el Medio Ambiente y el Desarrollo
in special working relationship with UNEP

In wheat farming areas, where 2,4D had been used as a herbicide to control broad leaved weeds, neighbouring vegetable and fruit growing farmers complained that their crops were being damaged. On investigations, it was found that this was caused by 2,4D which had drifted and caused leaf mottling. In the pesticides use, the lack of education in the handling and application is regretted as this leads to chemical poisoning casualties. In Kenya, absorption through the skin is easy due to the hot and humid conditions. Most farmers do not wear protective clothes because they are too expensive.

Dear Senator we are supporting "the Pesticide Export Reform Act of 1990".

Yours sincerely,

Bert Van Pinxteren
Officer in Charge

## STATEMENT OF WILLIAM J. McNICHOL, JR., ESQ.
Member, Board of Directors
National Coalition Against the Misuse of Pesticides

Mr. Chairman, members of the Committee, I am pleased to appear before you today in support of S.2227, the Pesticide Export Reform Act of 1990, an effective means for breaking the deadly Circle of Poison.[1] This legislation will eliminate the double standard for exported pesticides which is built in to current law, will increase the safety of our food supply, and will give the American farmer a long overdue fair shake.

The three phases of the Circle of Poison are now familiar to us all.

The Circle begins with the domestic production of pesticides which cannot legally be used in the United States or which can be used here only under certain circumstances and under special regulatory safeguards. The domestic production of these pesticides leaves a legacy of toxic waste, polluted air, land and water and an array of occupational hazards for workers in the plants which produce these pesticides.

Next, these pesticides leave our shores for foreign countries where their inappropriate use contaminates the homes, food and water of the unsuspecting country of use. Often, they are used by untrained, illiterate workers who lack the protective clothing or equipment which is necessary for their own safety and the proper use of the pesticide.

Finally, these pesticides are used in connection with the production of crops which are grown for export, thus setting the stage for the completion of the Circle of Poison. The Circle is closed when these pesticides return home to the United States on imported food.

An appalling number of these unwanted "homecomings" have been documented. The number of shipments of imported food that have been found to be tainted with Velsicol Chemical Corporation's chlordane and heptachlor is large enough that one may almost say that such events are commonplace.[2] More disturbing still is the fact that the U.S. government tests only 1% to 2% of imported foods for only a handful of pesticides. Most of the unregistered pesticides that form the Circle of

---

[1] A list of environmental, agricultural, consumer and religious organizations which support this bill is attached to this statement as Appendix A.

[2] See, e.g., Exporting Banned Pesticides: Fueling the Circle of Poison - A Case Study of Velsicol Chemical Corporation (1989).

Poison are not included in this testing program. The awful truth is that our import inspection program does almost nothing to protect us from returning unregistered pesticides.

Many different types of pesticides flow through the Circle of Poison. Each leaves its own sad trail.

Some of these pesticides have never been registered and have not been subjected to any regulatory review at all. These are truly "mystery chemicals" and they occupy a unique place in American law. Pesticides are among the few toxic chemicals which are exempt from regulation under the Toxic Substances Control Act. Regulation of pesticides is instead governed by the Federal Insecticide and Fungicide and Rodenticide Act (FIFRA). However, because the makers of unregistered pesticides never submit them to EPA for review under FIFRA, the never-registered pesticides exist in splendid isolation from almost all health and safety regulation. As a general matter, what little health and safety data may exist concerning these pesticides is known only to their manufacturers, who generally refuse to disclose the information to anyone. Even though they cannot be used in the United States, they are still exported to countries around the world where they are used in agriculture, homes and a variety of other situations.

Another group of pesticides which flows through the Circle of Poison is the banned pesticides. These pesticides were, at one time, legally available for use in the United States but, as data became available concerning their adverse effects on human health or the environment, they were declared illegal and were removed from the United States market. Even though these pesticides are known to be too unsafe to be used at all, United States law allows them to be produced here and exported to any country in the world for any use whatsoever.

In addition to pesticides which cannot legally be used in the United States, there are other pesticides which fuel the Circle of Poison. Many registered pesticides are known to be too dangerous to be used in connection with food crops. Good science has shown that they are simply too dangerous to be allowed in our food. Even so, these pesticides are considered safe enough for some non-food uses. Examples of these pesticides are DDT (which may be used in the United States in emergencies to control outbreaks of disease-carrying mosquitoes), and chlordane/heptachlor (which can be used in the United States only to kill termites or to protect underground cables). These chemicals are exported to countries which are not able to prevent their use on food crops. Pesticide manufacturers and distributors often promote the application of these pesticides to food crops even though it is known that they cannot be used safely on food.

Finally, there is a group of particularly hazardous pesticides which can legally be used in the United States, sometimes even on food crops, but which pose such serious dangers to human health and the environment that they must be used under close regulatory supervision or by carefully trained and equipped persons. Without such safeguards, these pesticides are known to present unacceptable risks to the health of workers, the food supply, or the environment. These include the "restricted use pesticides" (such as aldicarb and alachlor) which can be applied only by certified applicators using special techniques. Also among these particularly hazardous pesticides are pesticides which are given interim or "conditional" registrations even though their manufacturers have not shown that they are safe to use. These conditional registrations are granted with the understanding that the registrations can be revoked and the products promptly pulled from the marketplace if the data which must be submitted during the term of the temporary, conditional registration shows that these pesticides cause unreasonable adverse effects to human health or the environment.

It may make some sense to allow these particularly hazardous pesticides to be used in an industrialized country which has an effective pesticide use monitoring structure and a literate work force which can be given appropriate training and equipment. However, these pesticides become environmental and public health time-bombs in countries which cannot afford effective protective clothing, training and the like or which do not have meaningful pesticide regulatory establishments. The EPA has determined that, without these safeguards, these pesticides are incapable of safe use and that they cause unacceptable harm to human health and the environment. Sadly, present law permits the export of these pesticides every day to countries which are known to be incapable or unwilling to see to it that they are used properly.

S.2227 is a comprehensive attack on each phase of the Circle. It also takes positive steps to encourage the worldwide development of effective pesticide regulatory systems and facilitates the distribution of information concerning the safe use of pesticides and their alternatives.

S.2227 courageously ends the practice of exporting unregistered pesticides. This applies to pesticides which have been found to be too deadly to be used at all, as well as the "mystery chemicals" which manufacturers have never exposed to regulatory scrutiny. There can be no moral justification for allowing American manufacturers to sell products which are known to be incapable of any safe use. Similarly, the sale of potentially toxic "mystery chemicals" in complete disregard of whatever harmful effects they may have is indefensible. These practices are all the more reprehensible when in light of the fact that these products are often sold to consumers in less developed countries who are least likely to be able to deal with the mischief these products they cause.

The export of pesticides for use on food crops even though those pesticides have been found by the EPA to present an unacceptable dietary risk is a reprehensible practice. S.2227 deals with this by forbidding the export of pesticides which cannot be safely used on food to countries (1) where those pesticides are known to be used on food crops, or (2) where the marketing of those pesticides is likely to encourage their use on food crops, or (3) where greater quantities of the pesticides are shipped than can be used for non-food applications. This is an entirely reasonable provision which allows producers to export these non-food use pesticides for their legitimate uses. It also encourages producers to advertise, promote, label and distribute these pesticides in a way that discourages their use in connection with food production. The result will be a safer food supply for ourselves and our trading partners.

Under the provisions of S.2227, the particularly hazardous pesticides (such as restricted use pesticides) could only be exported to countries which have a pesticide regulatory apparatus which is capable of providing the appropriate safeguards which ensure the proper use of these pesticides. This requirement is consistent with the reasoning which justifies the use of these pesticides in the United States. These pesticides have been found to be too unsafe to be generally used here at home. However, their use is permitted because the U.S. government can impose and enforce special safeguards in connection with these particularly hazardous pesticides. In a country where such safeguards are not available, this justification does not apply. Thus, it makes no sense to export these pesticides to those countries.

Given the nature of these pesticides, the standards set by S.2227 for an effective pesticide regulatory establishment are bare minimums. They are not burdensome. For example, the importing country must have regulations which guard against false or misleading advertising. The country must also have a means of removing a pesticide from the marketplace if it is found to be unsafe. These basic measures are certainly within the reach of almost any country. A great many countries already have such minimum regulations in place and S.2227 directs EPA to assist those that do not have such a regulatory scheme in their efforts to establish one.

S.2227 also requires that exporters of particularly hazardous pesticides obtain the consent of the importer's government. The idea of a prior informed consent system is not new to S.2227. This principle has been endorsed by environmental organizations and governments around the world. In 1987, the Council of the U.N. Food and Agriculture Organization (FAO) unanimously decided to incorporate a prior informed consent procedure into its Code of Conduct on the Distribution and Use of Pesticides. A specific prior informed consent provision was incorporated into the FAO Code two years later. The United States is a member of the FAO and supported the adoption of a prior informed consent law.

This is an important "good neighbor" provision of S.2227. The consent provision gives assistance to smaller, less-developed countries in the enforcement of their pesticide laws. It also provides these countries with much needed leverage in their dealings with multi-national agrochemical manufacturers and distributors. Pesticide importing countries are strong supporters of the prior informed consent program.[3]

The prior informed consent system will involve no significant inconvenience or burden to the exporter since the exporter will be required to obtain the consent of the importing country only once every two years.

It is difficult to conceive of any valid objection to this system of prior informed consent. What manufacturer or distributor can legitimately claim the right to sell pesticides in a country where the government of that country has asked that those pesticides not be used? How can an exporter be heard to complain that the prior informed consent system deprives him of the right to sell his pesticides in countries where he can advertise his product in a false or misleading manner? Does the United States wish to defend the practice of selling particularly dangerous pesticides in countries where they can not be removed from the market if they are found to be unsafe? Does this country wish to continue to endorse the sale of pesticides which we know require special safeguards to countries which cannot provide those safeguards? I think not.

It is not enough to simply forbid or restrict the export of these pesticides. Purchasers of these pesticides must be able to turn to other means of pest management. S.2227 reflects an understanding of this principle. The bill mandates the distribution to importing countries of information concerning the use of alternative chemical and non-chemical pest management techniques. The EPA will also be required to assist other countries in the development of pesticide regulatory schemes and in the use of alternatives to the pesticides whose export would be ended or restricted by the bill. Science and practical experience around the world have shown these banned and restricted pesticides are not needed to protect the world's food supplies and public health. The world class productivity of the American farmer is eloquent proof of this. S.2227 will encourage responsible pesticide usage.

---

[3] When the FAO decided in 1987 to incorporate the principle of prior informed consent into its Code of Conduct, there was a divergence of opinion between the pesticide-manufacturing/exporting countries and the pesticide importing countries. Pesticide exporting countries urged further study, but the pesticide importing countries demanded an immediate commitment to the adoption of a prior informed consent requirement.

S.2227 also recognizes that it is time to stop penalizing U.S. farmers for using environmentally sound practices. Present law requires that U.S. farmers forgo the use of unregistered pesticides and that they use registered pesticides in accordance with appropriate regulatory requirements. This imposes significant costs on our farmers, costs not shared by competing producers in countries which are not able to impose and enforce appropriate health or environmental safeguards. The continued export by U.S. manufacturers of "cheap and dirty" pesticides helps to make this injustice possible. Why should our pesticide export policy perpetuate this competitive disadvantage for U.S. farmers? American farmers deserve a level playing field and our laws should see to it that they get one. This is especially important as U.S. farmers find themselves in an increasingly competitive global marketplace with shrinking margins.

S.2227 completes its assault on the Circle of Poison by introducing two new provisions to current law that will increase the domestic safeguards against tainted food.

First, tolerances for pesticides on a particular food will be revoked by operation of law for all pesticides which are not registered for use on that food. This will be a significant departure from current EPA practice.

In a 1982 policy statement, the EPA announced that it would revoke food tolerances for a pesticide whenever it cancels the food-use registrations for that particular pesticide.[4/] The agency concluded that, once the food-use registrations were cancelled:

> the associated tolerance can no longer be justified and logically should be revoked. The tolerance revocation should discourage misuse, i.e., the illegal application of a cancelled pesticide, as well as discourage persons in other countries from exporting to the United States food having residues of pesticide which can no longer be legally used in the United States because of safety reasons.

Sadly, the EPA has not lived up to the promise of its own policy statement. When the EPA cancelled the food-use registrations for heptachlor, it waited 6 years to propose action on heptachlor food tolerances, and waited 5 more years to act on its own proposal, for a total delay of 11 years. EPA waited 14 years to revoke DDT tolerances. The agency waited over 5 years to revoke tolerances for DBCP. Food tolerances for other pesticides which are not registered for use on food crops remain on the books today.

---

[4/] 47 F.R. 42956, September 29, 1982.

The EPA was right back in 1982. These tolerances should be revoked. We have waited eight years for EPA to be as good as its word. The EPA's foot dragging sends a clear message to Congress. Its track record shows that this matter cannot be entrusted to agency discretion. A specific legislative mandate is required. S.2227 provides this mandate.

Better border enforcement of pesticide tolerances is an important part of the assault on the Circle of Poison. USDA and FDA currently do not test for most of the pesticides which are used on imported food and almost none of the unregistered pesticides. Thus, what little food is inspected is not inspected effectively. Given the realities of the federal budget, it is unlikely that border inspection resources can be significantly increased. The only remaining option is to help our border inspection services to work more efficiently. S.2227 does this by requiring food importers to provide FDA and USDA with information on the pesticides which are actually or customarily used by the producers of that food. The new information provided under S.2227 will enable FDA and USDA to tailor their inspection operations to the realities of global pesticide use.

It has not escaped our notice that EPA has been the subject of harsh criticism during the past year for its lax administration of FIFRA's current export provisions. Representative Synar's subcommittee investigated this matter last May, and this investigation revealed an appalling dereliction of duty by EPA. Even the agency admitted that many of its practices in this area are contrary to law. Last month a somewhat contrite EPA promised to do better. Well, at least they promised to stop breaking the law themselves and to start to require that exporters begin to obey the law.

It is heartwarming that EPA may have seen the light and decided to take its responsibilities seriously. However, we do not believe that it would be wise for Congress to sit on its hands in the hope that the newly-awakened EPA will put an end to the Circle of Poison. There are at least two reasons why Congressional action is needed.

First, with all due respect for the sincere good intentions of Assistant Administrator Fisher, her agency's track record demonstrates that it has no fervor for its responsibilities in the area of export controls. Years of failure and an institutional reluctance to enforce export laws are not erased by a few civil enforcement actions and the publication in the Federal Register of a notice that EPA promises to do better.

Second, even if we could be sure that the EPA has shed its institutional reluctance to enforce export laws, present law is simply inadequate. Even if EPA vigorously enforced the existing export provisions of FIFRA, the Circle of Poison would remain untouched. The present statutory framework does not provide any way to break the Circle of Poison. Without the new statutory authority provided by S.2227, the export of unregistered pesticides will continue unabated, and the fouling of our common food supply will continue.

Finally, let me speak to the rumblings of pesticide manufacturers concerning money. Before today's hearing, industry groups have grumbled that S.2227 is a bad idea because it will hurt their business.

I hope that the farmers of America have heard that this is the industry position. They should know that the industry that portrays itself as the farmer's friend opposes a bill that would give American farmers a level playing field. Friendship apparently has its limits.

We have been threatened by industry with loss of American jobs. In truth, this is probably not much more than a threat. Most of the unregistered pesticides whose export is forbidden by S.2227 are made in plants which already make many other products. These plants will not be abandoned or shipped overseas, just because one of their products is discontinued. Also, there is no reason to suspect that American manufacturers of registered, general use pesticides will fail to seize this opportunity to export their products as replacements for banned or restricted pesticides. A net positive effect on our balance of payments is quite possible (especially once our farmers are given a level playing field).

One should not be mislead by recent industry press statements which suggest that S.2227 will drive research operations overseas. Consider, for example, DuPont's mammoth Experimental Station which is located near its corporate headquarters in Wilmington, Delaware. DuPont often proudly points out that the Station is perhaps the largest collection of Ph.D. researchers in the world. Billions have been invested there in plant and equipment. It will not be moved away from the colleges and universities which supply the scientists and engineers that drive DuPont's research efforts. It will not be moved away from DuPont's corporate headquarters to a third world country with no universities and no pesticide laws.

The only "research" which might be moved overseas is field trials (usually involving only a few hundred acres on which a new pesticide is tested). Industry misleads this committee and the American people when it uses the possible diversion of small scale field trials as a predicate for the suggestion that S.2227 will deal a fatal blow to American R&D.

S.2227 is a careful, well-considered response to the Circle of Poison. It is a wise solution to a difficult problem. I am pleased to report to you that today, only a few weeks after its introduction, S.2227 is already being relied upon by environmental groups and government agencies around the world as a model pesticide export law. The sponsors of this bill (and the companion House bill) are to be commended for the leadership that they have provided.

The time has come to break the Circle of Poison. Enactment of S.2227 is the right way to achieve this goal. I urge the Committee to act favorably on S.2227.

## APPENDIX A

## Organizations Supporting the Pesticide Export Reform Act of 1990

American Agriculture Movement
Institute for Alternative Agriculture
International Alliance for Sustainable Agriculture
Florida Fruit and Vegetable Growers Association
National Farmers Union
National Save the Family Farm Coalition

Conservation Council for Hawaii
Environmental Defense Fund
Environmental Project on Central America - EPOCA
Greenpeace
National Coalition Against the Misuse of Pesticides
National Wildlife Federation
National Toxics Campaign
Natural Resources Defense Council
Public Voice
Sierra Club
Terra
Environment Liaison Center (Kenya)
Fundacion Natura (Ecuador)
Householders for Safe Pesticides (Australia)
Pesticide Action Network, (North American Regional Center)
Pesticide Action Network, (European Regional Center)
Total Environment Center (Australia)

Center for Science in the Public Interest
Coordinating Committee on Toxics and Drugs
Consumers Union
Consumer Federation of America
International Organization of Consumers Unions
National Network to Prevent Birth Defects
Public Citizen's Congress Watch
U.S. Public Interest Research Group

Home Mission Board, Progressive National Baptist Church
National Council of Churches
Unitarian Universalist Association of Congregations
United Methodist Church, General Board of Church & Society

Statement for the Record by John W. Harman, Director, Food and Agriculture Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office, on Five Latin American Countries' Controls Over the Registration and Use of Pesticides

Mr. Chairman and Members of the Committee:

We are pleased to submit, for your hearing record on the proposed "Pesticide Export Reform Act of 1990," this statement on five Latin American countries' controls over the registration and use of pesticides. The information is based on a report we did at the request of Representatives Leon Panetta and Frank Horton (GAO/RCED-90-55, Mar. 22, 1990).

As part of that review, we visited Chile, Mexico, Costa Rica, Guatemala, and the Dominican Republic during 1988 to determine what their governments, exporters, and export growers were doing to ensure that produce grown for U.S. markets would meet U.S. pesticide requirements. We also obtained information on (1) assistance that U.S. agencies have provided to help these countries meet U.S. pesticide requirements and (2) U.S. agencies' responsibilities for safety and quality of imported produce and international agencies' roles in developing food safety systems. In addition, we identified issues for congressional consideration related to these objectives.

As you requested, this statement focuses on the five governments' regulatory controls over the registration and use of pesticides. It includes information about the regulatory status, in these five countries, of pesticides whose registrations the Environmental Protection Agency (EPA) has canceled or suspended or whose registrations U.S. chemical companies have voluntarily withdrawn.

Overall, we found that each of the five countries has laws and regulations controlling pesticide availability and use. However, government officials in all of the countries, except Chile, told us that government monitoring and enforcement activities, particularly monitoring of pesticide availability and field sampling for residue testing, were generally limited. For example, these countries lacked resources, such as inspectors, transportation to monitor distributors and perform field sampling, and adequate residue testing facilities. Resource constraints had also limited some of these governments' ability to obtain information on U.S. pesticide requirements and disseminate it to export growers.

Although some of these countries did not have adequate information about U.S. pesticide/crop requirements, we found that they have all prohibited, restricted, or not registered many pesticides that EPA has canceled or suspended or that U.S. chemical manufacturers have withdrawn. The constraints in the countries' monitoring and enforcement capabilities may, however, promote lingering concern that these pesticides, although not allowed, may be available for use on the countries' domestic and exported produce.

By way of background, a rapid growth in U.S. fruit and vegetable imports during the 1980s raised concerns about the safety and quality of imported foods and the presence of pesticide residues. In May 1988 we reported that, from 1980 to 1986,[1] the import share of the U.S. market for major fresh and frozen fruits rose from about 26 percent to about 33 percent, while the share for major fresh vegetables rose from about 5 percent to about 7 percent. Latin American and Caribbean countries supply most U.S. imports of fruits and vegetables--5.5 million metric tons, or 77 percent, in 1988. The countries we visited accounted for over half of the Latin American/Caribbean import volume in 1988.

While international guidelines on the registration and use of pesticides on food exist, their adoption by individual countries is voluntary. Each country sets its own laws for pesticide registration and use. These laws vary considerably in sophistication and degree of implementation among countries.

We looked at the five governments' practices that may affect the presence and composition of pesticide residues on U.S. imported produce. These practices included (1) registering pesticides; (2) considering a pesticide's U.S. status during registration; (3) canceling, restricting, or not registering pesticides that EPA has canceled or suspended; and (4) registering pesticides that do not have EPA tolerances.[2]

## FIVE COUNTRIES' PESTICIDE REGULATORY MECHANISMS

Registration is necessary to provide for the proper and safe use of pesticides and to protect people and the environment from ineffective or detrimental chemicals. Each of the five countries has laws and regulations requiring pesticides to be registered before they can be sold or used, and--with the exception of the Dominican Republic--each country required pesticide registrations to specify crop use.[3] Because each country registers pesticides based on its own climate, crops, and pest problems, an exporting country may have different pesticides registered than its importing countries. Furthermore, pesticides may be approved for use on a certain crop in the exporting country and a different crop or no crops in the importing country.

---

[1] Agricultural Trade: Causes and Impacts of Increased Fruit and Vegetable Imports (GAO/RCED-88-149BR, May 10, 1988).

[2] A pesticide residue tolerance is the maximum legal level of a pesticide residue that may exist in or on a food.

[3] The Dominican Republic revised its pesticide statute in 1988 to include, among other things, a requirement for a pesticide registration to be crop-specific. At the time of our visit, however, the statute had not received final approval.

In these five countries the registrants (usually chemical manufacturers) had to provide much of the same type of information EPA requires for a U.S. registration. This information includes the pesticide's name, chemical composition, and use instructions; health and environmental safety studies; and residue information. Officials of four of the five countries told us, however, that because of a lack of scientific and budgetary resources, their governments generally do not validate the scientific studies presented by the registrants.

Instead, government officials require registrants to submit, as part of the registration application, a "certificate of free sale" from the country of origin. The certificate is the registrant's certification that the pesticide is legal for use in the country where it is manufactured--usually an industrialized country--where the pesticide's health effects will probably have been independently validated. The government officials use these certificates to protect their countries from registration and indiscriminate sale of untested chemicals or chemicals that have been proven unsafe. While each of the five countries required a certificate of free sale, verification by the corresponding government agency--such as EPA--in the country of origin was not required in any of these countries. We did not verify the countries' registration processes or their use of information during those processes.

All five countries use international maximum residue limits (tolerances) in establishing the amount of acceptable pesticide residue on foods. These international standards are developed by the Codex Alimentarius Commission, a subsidiary body of the U.N.'s Food and Agriculture Organization (FAO) and World Health Organization (WHO). Codex sets international food standards to protect the health of consumers and to facilitate international trade in food.[4] The United States is an active participant in Codex.

## CONSIDERING PESTICIDES' U.S. STATUS DURING REGISTRATION

In each country, government officials told us that, during the registration process, they try to determine, through use of the certificates of free sale and other available information, the pesticide's status in industrialized countries, including the

---

[4] Codex has published international standards for the hygienic and nutritional quality of food; food additives; pesticide residues, including maximum residue limits (tolerance levels); contaminants; labeling and presentation; and methods of analysis and sampling.

United States. However, the use of information other than the certificates of free sale varied among the five countries, depending on the degree of access to this information.

Three of the countries--Costa Rica, the Dominican Republic, and Guatemala--lacked official U.S. regulatory information, such as title 40, part 180, of the Code of Federal Regulations (which provides tolerances and exemptions from tolerances for pesticide chemicals in or on raw agricultural commodities), or other comprehensive commercial publications that incorporate U.S. regulatory information. Government officials in these countries said that they would like more information on U.S. pesticide requirements.

Officials of all five countries said that they consider such information as EPA notifications to foreign governments about exports of unregistered pesticides and about changes in a pesticide's U.S. status, such as cancelation or suspension, if available, when making pesticide registration decisions.[5] However, in an April 1989 report,[6] we said that EPA had not issued notices to foreign governments for all pesticides when significant action had been taken and that EPA's 1985 booklet entitled Suspended, Cancelled, and Restricted Pesticides was outdated. We said that the type of information in this booklet, if updated and disseminated, would alert countries using the included pesticides to initiate actions or request additional data as a basis for making their own risk/benefit analysis concerning use.

We believe that EPA's notices of exports of unregistered pesticides and about changes in a pesticide's U.S. status can be valuable to foreign countries in properly evaluating the risk of registering or continuing use of a pesticide. They alert these countries to imports of pesticides into their countries that are not registered for use in the United States because of health concerns or other reasons or about the reasons for significant regulatory actions the United States has taken.

---

[5] Section 17(a) of the Federal Insecticide, Fungicide, and Rodenticide Act establishes notification requirements for the export of pesticides that are not registered for domestic use in the United States. In a series of steps, the foreign purchaser must acknowledge, and the government is subsequently notified, that the pesticide is not registered and cannot be sold for use in the United States. Section 17(b) requires EPA to notify foreign governments and appropriate international agencies about significant changes in a pesticide's U.S. status, such as cancelation or suspension. The notices generally contain information on when EPA took the action, background on what precipitated the action, an explanation of the action, and the basis EPA had for taking the action. The notices also identify EPA contacts.

[6] Pesticides: Export of Unregistered Pesticides Is Not Adequately Monitored by EPA (GAO/RCED-89-128, Apr. 25, 1989).

On February 12, 1990, EPA published a notice in the Federal Register on proposed changes in its notification process. The notice cited our April 1989 report recommendations and issues discussed in May 1989 hearings on pesticide exports before the Environment, Energy, and Natural Resources Subcommittee of the House Committee on Government Operations as some of the reasons for the changes.

## CANCELING OR RESTRICTING PESTICIDES THAT ARE ILLEGAL IN THE UNITED STATES

While the five countries do not generally register pesticides to meet another country's import requirements, we found that the governments have prohibited, restricted, or not registered many pesticides that the United States has canceled or suspended, usually because of health or environmental reasons. As a result, the legal availability of these pesticides, as well as the potential for their use on export crops destined for the United States, is decreased.

We reviewed the 1987-88 registration status in the 5 countries of 52 pesticides whose U.S. registrations EPA said it had canceled and/or suspended, for various reasons, as of October 25, 1988. These 52 pesticides included 26 whose registrations had been voluntarily withdrawn by chemical manufacturers. We analyzed the five countries' registration data to determine if these pesticides were registered in those countries. As the tables in appendixes I and II show, the five governments had prohibited, restricted, or not registered many of these pesticides. For example, Chile had not registered or had prohibited use of 49 of the 52 pesticides, or 94 percent; Guatemala and Costa Rica, 47, or 90 percent; the Dominican Republic, 44, or 85 percent; and Mexico, 42, or 81 percent.

Each of the five governments' regulations provided for (1) reregistration procedures or reviews and/or (2) procedures for revoking a pesticide's registration when adverse health, safety, or environmental factors become known. However, these countries--like the United States--do not always remove canceled pesticides from registration lists or from commercial channels at the time of cancelation. As a result, pesticides that are not approved for use in a country may sometimes be legally found in distribution channels.

For example, some countries' regulations, such as the Dominican Republic's and Costa Rica's, specify that if a chemical is voluntarily canceled by a manufacturer, the registration will be maintained for 2 years until existing stocks are used. In Mexico, when officials determine that a pesticide should be removed from the official pesticide list, it is still legal for use for 2 years.

In Guatemala, pesticides that have had their registrations canceled are allowed to remain in commercial channels for a time to allow existing supplies to be depleted.

For example, Guatemala canceled 18 pesticides in 1987. As of May 1988 its list of registrations continued to include several of these chemicals because, according to government officials, they gave the chemical companies 6 months to sell existing stocks, and use of these pesticides was to be allowed to continue until supplies were exhausted. Similarly, the Dominican Republic canceled a series of pesticides during the 1970s; some, however, had not been removed from the government's list of registered products as of October 1988. For example, distribution and sale of the pesticide 2,4,5-T is prohibited; yet the chemical's registration was still listed in 1988.

## PESTICIDES REGISTERED WITHOUT EPA TOLERANCES

We identified 110 pesticides that had been legally registered for use as of 1987-88 in 1 or more of the 5 countries, but which do not have EPA tolerances established for a food use in the United States. (See app. III.) Although we do not know the reasons EPA has not established tolerances for these pesticides, in some cases, EPA may not have evaluated these pesticides or may have denied a U.S. tolerance or registration. However, it may be appropriate to register these pesticides in these countries because of the countries' specific pest problems, crops, and climates; because the pesticides are suitable for nonfood uses; or because exporters need alternative pesticides to be legally available to enable them to meet their export markets' differing requirements. While registering these pesticides may therefore be appropriate to the countries' needs, using such pesticides on exported produce could result in the produce being refused entry into the United States if the Food and Drug Administration (FDA) detects residues.

### Most Violations on Imported Produce Are No-Tolerance Violations

According to FDA, which samples imported foods for illegal pesticide residues and other prohibited substances, its data have consistently shown that most pesticide residue violations on imported produce involve no-tolerance violations rather than residue levels that exceed EPA tolerance levels. No-tolerance violations result when FDA detects residues of pesticides that do not have U.S. tolerances established for use on a particular crop in the United States. In contrast, over-tolerance violations--which are far fewer--result when pesticide residues exceed EPA's established tolerances on permitted pesticides. The over-tolerance violations most often occur because of pesticide misuse, unusual weather conditions, or poor agricultural practice.

Each of the five countries has experienced no-tolerance violations on produce exported to the United States. In many cases, U.S. tolerances had not been established for the specific export crop, although a tolerance may have been established for a related crop. Some commodities, such as chayote, yucca, and Chinese vegetables, either are not grown or are not grown commercially in significant quantities in the United States and tend to have few, or no, U.S. tolerances. As a result, these countries' growers may have their produce rejected at U.S. entry points because of no-tolerance pesticide violations if FDA detects the pesticides.

Our analysis of FDA import monitoring data for 1986 (the most readily accessible at the time of the analysis), which covered all countries exporting produce to the United States, showed that 230, or 90 percent, of that year's 256 import violations occurred because U.S. tolerances had not been established for the food commodities sampled. The remainder resulted from residues that exceeded established EPA tolerance levels. About two-thirds of the no-tolerance violations involved pesticides that had U.S. tolerances for commodities, including fruits and vegetables, other than the type cited for violation.

- - - - -

In summary, much of the difficulty the five countries we visited had in considering U.S. pesticide requirements related to the absence of U.S. pesticide tolerances for certain export crops and incomplete information about what pesticides are acceptable for use on produce destined for the United States. These countries have designed pesticide regulatory systems to control the registration and use of pesticides in their countries. They have expressed an interest in knowing more about the status of pesticides in the United States--which they try to incorporate into their registration decisions--and in keeping known pesticides of concern from being available in their countries for use on either domestic or export crops.

Despite a general lack of information about U.S. pesticide/crop requirements in some of these countries, they have all prohibited, restricted, or not registered a large number of pesticides EPA has canceled or suspended and that U.S. chemical manufacturers have withdrawn. While pesticide registration systems are in place and many known chemicals of concern are not legally sanctioned in these countries, constraints in the countries' monitoring and enforcement capabilities may contribute to concern that these pesticides may be available for use on the countries' domestic and exported produce. The extent to which, and in what ways, U.S. agencies should increase their involvement in dealing with these countries' need for more information and additional U.S. tolerances are issues with implications for food safety, U.S. competitiveness, and U.S. agencies' responsibilities and resources.

## Status in Five Countries of Pesticides on EPA's October 25, 1988, Revised List of Canceled and/or Suspended Chemicals

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Aldrin[a] | P/L | P | P | P | NR |
| Aspon | NR | NR | NR | NR | NR |
| Brominated salicylanilide | NR | NR | NR | NR | NR |
| Carbophenothion[b] | NR | NR | R | NR | R |
| Chlordane[a]/ Heptachlor[c] | P | R | RS[d] | P/L | R |
| Cycloheximide[b] | NR | NR | NR | NR | NR |
| DBCP (dibromochloropropane) | NR | P | P/L | P/L | NR |
| DDD (TDE) (1,1-dichloro-2,2 bis [p-chlorophenyl] ethane) | NR | NR | NR | NR | NR |
| DDT (dichloro diphenyl trichloroethane) | P | P | NR | P | R[e] |
| Demeton[b] | NR | NR | NR | NR | NR |
| Dialifor[b] | NR | NR | NR | NR | NR |
| Dieldrin[a] | P/L | P | P/L | P | NR |
| Dinitramine[b] | NR | NR | NR | NR | NR |
| Dinoseb[b] | NR | P | NR | P/L | NR |
| EDB[b] (ethylene dibromide) | P | P | P | P | R |
| Fenaminosulf | R | R | NR | R | NR |
| Fluchloralin[b] | NR | NR | R | NR | NR |
| Kepone (Chlordecone) | NR | P | RS | NR | NR |

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Mirex | NR | NR | NR | R | NR |
| Monuron TCA (trichloroacetic acid) | NR | NR | NR | NR | NR |
| Perfluidone[b] | NR | NR | NR | NR | NR |
| Potassium permanganate | NR | NR | NR | NR | NR |
| Silvex[b] | NR | P | NR | NR | NR |
| 2,4,5-T (2,4,5-trichlorophenoxy-acetic acid) | NR | P | P/L | P/L | NR |
| Thiophanate | NR | NR | NR | NR | NR |
| Toxaphene[b] | NR | P | NR | P/L | R |

Legend

NR = Not registered for use
P = Prohibited or suspended
P/L = Prohibited; not removed from country's list of registered pesticides
R = Registered for use
RS = Restricted

[a] EPA has action levels for this pesticide.

[b] EPA has a tolerance(s) for this pesticide.

[c] EPA has tolerances and action levels for this pesticide.

[d] The Dominican Republic permits use only for termites.

[e] Mexico's health ministry uses DDT to control malaria.

Source: EPA's Office of Pesticide Programs' Oct. 25, 1988, revised list of canceled and/or suspended chemicals; official pesticide registration documents, statutes, resolutions, and proclamations from five countries; 40 C.F.R. parts 180 and 185 (revised as of July 1, 1989); and The Pesticide Chemical News Guide (Washington, D.C.: Louis Rothschild, Jr.), June 1, 1988.

## Status in Five Countries of Pesticides on EPA's October 25, 1988, Revised List of Voluntarily Canceled Chemicals of Significance

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Acrylonitrile | NR | NR | NR | NR | NR |
| Arsenic trioxide | NR | NR | NR | NR | NR |
| Benzene (all products) | NR | NR | NR | NR | NR |
| BHC (benzene hexachloride) | NR | NR | NR | P | R |
| Captafol[a] | R | R | R | R | R |
| Carbon tetrachloride | NR | NR | R | NR | NR |
| Chloranil | NR | NR | NR | NR | NR |
| Copper acetoarsenite | NR | NR | NR | NR | NR |
| Copper arsenate (basic) | NR | NR | NR | NR | NR |
| Cyhexatin[a] | R | R | NR | NR | R |
| Endrin[b] | P | R | P/L | P | NR |
| EPN[a] (O-ethyl O-p-nitrophenyl phenylphosphonothioate) | NR | NR | R | R | R |
| Erbon | NR | NR | NR | NR | NR |
| Hexachlorobenzene | NR | NR | NR | NR | NR |
| Lead arsenate[a] | NR | NR | NR | NR | NR |
| Monuron | NR | NR | NR | NR | NR |
| Nitrofen (TOK[c]) | NR | P | R | NR | NR |
| OMPA (Octamethylpyrophosphoramide) | NR | NR | NR | NR | NR |

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Pentachlorophenol (some nonwood uses continue) | NR | NR | NR | RS | R |
| Perthane | NR | NR | NR | NR | NR |
| Phenarsazine chloride | NR | NR | NR | NR | NR |
| Ronnel[a] | NR | NR | NR | NR | NR |
| Safrole | NR | NR | NR | NR | NR |
| Sodium arsenite[a] | NR | NR | NR | NR | NR |
| Strobane | NR | NR | NR | NR | NR |
| Trysben | NR | NR | NR | NR | NR |

Legend

NR = Not registered for use
P = Prohibited
P/L = Prohibited; not removed from country's list of registered pesticides
R = Registered for use
RS = Restricted

[a] EPA has a tolerance(s) for this pesticide.

[b] EPA has action levels for this pesticide.

[c] Trade name.

Source: EPA's Office of Pesticide Programs' Oct. 25, 1988, revised list of voluntarily canceled chemicals of significance; official pesticide registration documents, statutes, resolutions, and proclamations from five countries; 40 C.F.R. parts 180 and 185 (revised as of July 1, 1989); and The Pesticide Chemical News Guide, June 1, 1988.

## Status in Five Countries of Pesticides That Do Not Have EPA Tolerances Established for the Active Ingredients

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Alachlor[a] + Nudolin | NR | NR | R | NR | NR |
| Aldrin[b] | R[c] | NR | NR | NR | NR |
| Amitrole | NR | NR | R | NR | NR |
| Azamethiphos | NR | NR | NR | NR | R |
| Azinphos-ethyl | R | NR | R | NR | NR |
| Azocyclotin[d] | R | NR | NR | NR | NR |
| BHC (benzene hexachloride)[e] | NR | NR | NR | NR | R |
| Bioallethrin | NR | R | NR | NR | NR |
| Bitertanol[d] | R | NR | NR | NR | R |
| Blasticidin-S | NR | R | R | NR | NR |
| BPMC (Fenobucarb) | NR | R | NR | NR | NR |
| Brodifacoum | NR | R | NR | R | R |
| Bromadiolone | NR | NR | NR | NR | R |
| Bupirimate | R | NR | NR | NR | NR |
| Buprofezin | NR | NR | NR | R | NR |
| Buthidazole | NR | NR | R | R | NR |
| Butocarboxim | NR | NR | NR | R | NR |
| Caldo Bordeles + Cufraneb | NR | NR | R | NR | NR |
| Captan[f] + Metoxicloro | NR | NR | R | NR | NR |
| Carbaxim + Captan[f] | NR | NR | R | NR | NR |

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Cartap[d] | NR | R | NR | NR | NR |
| Chlordane[g] | NR | R | R | R[c] | R |
| Chlordane[g] + Pentacl | NR | R | NR | NR | NR |
| Chlorophacinone | NR | R | R | NR | NR |
| Chlorotoluron | NR | NR | NR | NR | R |
| Ciometrinilo | NR | R | NR | NR | NR |
| Citrolina | NR | NR | NR | NR | R |
| Colecalciferol | NR | NR | NR | NR | R |
| Coumachlor | NR | NR | NR | NR | R |
| Coumachlor + Sulfamilamide | NR | NR | R | NR | NR |
| Coumatetralyl | NR | R | R | R | R |
| Cyfloxylate | NR | NR | R | NR | NR |
| Cymoxanil + Mancozeb[f] | NR | NR | R | NR | NR |
| DBCP (dibromochloropropane) | NR | NR | R[c] | R[c] | NR |
| Demeton-(O or S)-methyl | R | R | R | R | R |
| Dichlofluanid[d] | R | R | NR | R | NR |
| Dieldrin[b] | NR | NR | R[c] | NR | NR |
| Dienochlor | R | R | R | R | R |
| Dietanolamina | NR | R | NR | NR | NR |
| Difenacoum | NR | NR | R | NR | NR |
| Dimethirimol | NR | NR | R | NR | NR |

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Dimethylamine | NR | R | NR | R | NR |
| Dimethyl urea | NR | NR | R | R | NR |
| Dinobuton | NR | NR | R | NR | NR |
| Dioctil Sulfosun. | NR | R | NR | NR | NR |
| Diphacinone | NR | NR | R | R | R |
| Dodemorph | NR | R | R | R | R |
| Edifenphos[d] | NR | R | R | R | R |
| Epibloc | NR | NR | NR | R | NR |
| Ethidimuron | NR | NR | NR | NR | R |
| Ethiofencarb[d] | R | NR | NR | NR | NR |
| Fenaminosulf | R | R | NR | R | NR |
| Fentin acetate | R | R | R | R | R |
| Flamprop-methyl | NR | NR | NR | NR | R |
| Flocoumafen | NR | NR | NR | R | NR |
| Flubenzimine | R | NR | NR | NR | NR |
| Flumetrina | NR | NR | NR | NR | R |
| Fluorodifen | NR | NR | R | NR | NR |
| Fluosilicato | NR | NR | R | NR | NR |
| Flutriafol | R | NR | NR | NR | NR |
| Fonofos | NR | NR | R | NR | NR |
| Glufosinate | NR | NR | NR | NR | R |
| Guazatine[d] | NR | NR | R | NR | NR |
| Hexaconazole | NR | NR | NR | R | NR |
| IBP (Iprobenfos) | NR | R | NR | NR | NR |

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Ioxynil + 2,4-D[f] | NR | R | NR | NR | NR |
| Ioxynil octanoate | NR | NR | R | NR | NR |
| Isazofos | NR | R | R | R | NR |
| Isoforona | NR | R | NR | NR | NR |
| Isoproturon | NR | NR | NR | NR | R |
| Kasugamycin | R | R | R | R | R |
| MAFA | NR | R | NR | R | NR |
| MCCEP | NR | NR | R | NR | NR |
| Mephosfolan | NR | R | R | R | NR |
| Metaldehyde[h] + Tri. Arsenate | NR | NR | R | NR | NR |
| Methabenzthiazuron + Amitrole | NR | R | NR | NR | NR |
| Metham-sodium | NR | NR | R | R | R |
| Methyl isothiocyanate | NR | NR | NR | NR | R |
| Mirex | NR | NR | NR | R | NR |
| Naptalam | NR | NR | R | NR | NR |
| Nitrofen (DCP) | NR | NR | R | NR | NR |
| Ofurace | NR | R | NR | NR | NR |
| Omethoate[d] | R | NR | NR | NR | R |
| Oxycarboxin | NR | R | R | R | R |
| Penconazole | NR | NR | NR | R | NR |
| Penconazole + Mancozeb[f] | R | NR | NR | NR | NR |
| Pentachlorophenol | NR | NR | NR | R | R |

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Phenothiol | NR | R | NR | NR | NR |
| Phenothrin[i] | NR | R | NR | NR | NR |
| Phenthoate[d] | R | NR | R | R | R |
| Phoxim[d] | R | R | R | R | R |
| Piperophos + Dimethametryn | NR | R | R | R | NR |
| Pirimicarb[d] | R | R | NR | R | R |
| Pirimidil | NR | NR | R | NR | NR |
| Propamocarb[d] | NR | NR | R | R | NR |
| Prothiofos | R | R | NR | R | NR |
| Prothoate | NR | NR | R | NR | NR |
| Pyracarbolid | NR | NR | NR | R | NR |
| Pyrazophos | R | R | R | NR | R |
| Quinalphos | R | NR | NR | NR | NR |
| Sal Sodio Disp | NR | R | NR | NR | NR |
| Sal Sodio Naft. | NR | R | NR | NR | NR |
| Tetracloruro de Carbono + Acrylo | NR | NR | R | NR | NR |
| Tetramethrin | NR | R | NR | NR | R |
| Thiometon[d] | R | NR | NR | NR | NR |
| Tiocarbazil | NR | NR | R | NR | NR |
| Tolclofos-methyl | NR | R | NR | NR | NR |
| Triazophos[i] | NR | NR | R | R | R |
| Triflumuron | R | NR | NR | NR | R |
| Xiligen | NR | R | NR | NR | NR |

Legend

NR = Not registered for use
R = Registered for use

[a] EPA has tolerances for this chemical, but not for combination shown.

[b] EPA has action levels and Codex has maximum residue limits (MRLs) for this chemical.

[c] This pesticide is on the country's registration list but has been officially prohibited.

[d] Codex has MRLs for this chemical.

[e] EPA has action levels for this chemical.

[f] EPA has tolerances and Codex has MRLs for this chemical.

[g] EPA has action levels and Codex has extraneous residue limits for this chemical.

[h] 40 C.F.R. 185.4025 allows preharvest use of this chemical on strawberries, but sets a zero tolerance for residues.

[i] Codex has temporary MRLs for this chemical.

Source: Government pesticide registration lists for Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico for 1987 or 1988. EPA verified in 1989 that, according to its records, the pesticides (except as shown in the footnotes) do not have tolerances established for any food use in the United States. Where possible, English spellings and other information on chemicals were obtained from the Code of Federal Regulations, title 40 parts 180 and 185 (revised as of July 1, 1989); Farm Chemicals Handbook (Willoughby, Ohio: Meister Publishing Co.), 1987; Glossary of Pesticide Chemicals, FDA, Sept. 1988; Guide to Codex Maximum Limits for Pesticide Residues, Part 2, CAC/PR 2 - 1988, Apr. 1988, issued by The Netherlands; The Pesticide Chemical News Guide, Reo, P.D., and M.B. Duggan, eds. (Washington, D.C.: Louis Rothschild, Jr.), June 1, 1988; and The Pesticide Manual, A World Compendium, 8th ed., C.R. Worthing, ed. (Thorton Heath: The British Crop Protection Council), 1987.

United States General Accounting Office

GAO

Report to Congressional Requesters

March 1990

# FOOD SAFETY AND QUALITY

## Five Countries' Efforts to Meet U.S. Requirements on Imported Produce

GAO United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-237768.1

March 22, 1990

The Honorable Leon E. Panetta
House of Representatives

The Honorable Frank Horton
House of Representatives

This report responds to your September 3, 1987, letter and subsequent discussions with your offices requesting information on (1) foreign government and private industry efforts to assure that imported produce meets U.S. safety and quality standards and (2) what federal agencies are doing to assist foreign countries in meeting U.S. safety requirements. Our review focused primarily on government and private sector pesticide controls over exported produce in five countries: Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico. We also identified efforts by several federal agencies to help foreign countries improve their pesticide registration and use practices. In addition, we obtained background information on the responsibilities or activities of U.S. agencies, states, and private industry in monitoring imported produce.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Director, Office of Management and Budget; the Secretary of Agriculture; the Secretary of Health and Human Services; the Administrator, Agency for International Development; the Administrator, Environmental Protection Agency; the Commissioner, Food and Drug Administration; and other interested parties.

Major contributors to this report are listed in appendix VI.

John W. Harman
Director, Food and
Agriculture Issues

# Executive Summary

## Purpose

With the rapid growth in fruit and vegetable imports during the 1980s, concern about the safety and quality of imported foods and the presence of pesticide residues has increased. Previous GAO work identified weaknesses in monitoring imported food and limited information on foreign pesticide use. As a result, Representatives Leon Panetta and Frank Horton asked GAO to provide information on (1) foreign government and private industry efforts to ensure that imported fresh produce meets U.S. safety and quality standards, (2) what U.S. agencies are doing to assist foreign countries in meeting U.S. safety requirements, and (3) U.S. agencies' responsibilities for safety and quality of imported produce.

## Background

The U.S. safety and quality network for imported produce involves several U.S. agencies, states, and private industry. The Environmental Protection Agency (EPA) registers pesticide products and sets maximum acceptable pesticide residue levels—tolerances—allowed in foods consumed in the United States. The Food and Drug Administration (FDA) samples imported foods to identify prohibited substances, including illegal pesticide residues; and it enforces EPA standards for all domestic and imported food products, except meat, poultry, and eggs, which the Department of Agriculture (USDA) monitors. USDA also determines if certain imported produce meets minimum quality requirements for size, grade, and maturity. Some states and supermarket chains have produce tested for pesticide residues. (See ch. 1.)

Latin American and Caribbean countries supply most U.S. imports of fruits and vegetables—5.5 million metric tons, or 77 percent, in 1988. GAO visited five countries—Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico—which accounted for over half of the Latin America/Caribbean import volume in 1988.

## Results in Brief

Like the United States, the five countries' governments have not designed their food safety and quality systems—specifically regarding pesticides—to meet other countries' import requirements but primarily to address domestic needs and issues. Because each country registers pesticides on the basis of its own climate, crops, and pest problems, an exporting country faces a maze of pesticide requirements that may differ from its own and that may not necessarily be health-related. Some of the five governments' pesticide registration practices may affect the legal availability and use of certain pesticides and, therefore, the presence and composition of pesticide residues on produce imports from those countries.

Some countries' export sectors try, to varying degrees, to use management practices that consider U.S. pesticide residue requirements. Where GAO saw evidence of such practices—by multinational firms in all five countries and by other growers in Chile and Mexico—growers had exported produce to the United States for some time and had established networks to obtain information and technical assistance—through cooperative efforts of governments and exporter/grower organizations. Where U.S. requirements were not specifically considered in selecting pesticides for use on exports—particularly among the less experienced growers in Costa Rica, the Dominican Republic, and Guatemala—growers had not developed networks for obtaining information on their export markets' pesticide requirements.

The current Uruguay Round of the General Agreement on Tariffs and Trade has included proposals to harmonize food safety and sanitary requirements—including pesticide residue standards—as a way to reduce their use as technical barriers to trade. However, because adoption of international standards for pesticide residues is a slow, deliberative process, information exchange among nations regarding specific pesticide standards will need to increase to ensure that world trade is facilitated and that consumers are assured that food imports meet their countries' safety standards.

Several U.S. agencies, as well as international organizations, provide assistance related to pesticide use to developing countries. The U.S. agencies include EPA, FDA, USDA, and the Agency for International Development (AID). International organizations include the United Nations' Food and Agriculture Organization, World Health Organization, and Pan American Health Organization. GAO did not review the effectiveness of the agencies' or organizations' assistance.

## GAO Analysis

### Government Practices That May Affect Residues on U.S. Imports

Government practices that may affect the presence and composition of pesticide residues on U.S. imported produce from the five countries include (1) registering and reregistering pesticides; (2) considering a pesticide's U.S. status during registration; (3) canceling, restricting, or not registering pesticides that EPA has canceled or suspended; (4) providing information about U.S. standards to export growers; and (5) registering pesticides that do not have EPA tolerances. Some practices tend to limit the legal availability of pesticides that are not allowed in the United States, and they help to increase the likelihood that exports to the United States will not contain residues of such pesticides. For example, the 5 governments had prohibited or not registered from 81 percent to 94 percent of 52 pesticides whose registrations EPA had canceled or suspended as of October 25, 1988, including 26 whose registrations had been voluntarily canceled by manufacturers. In addition, two governments—Chile and Mexico—had provided information on U.S. pesticide residue standards to export growers, to assist them in making pesticide decisions for their crops. (See ch. 2.)

GAO also identified 110 pesticides registered for use in 1 or more of the 5 countries that do not have EPA tolerances established for a food use in the United States. In some cases, EPA may not have evaluated these pesticides or may have denied a U.S. tolerance or registration. Registering pesticides that do not have U.S. registrations or EPA tolerances may be appropriate in a country because of its specific pest problems, crops, and climate; because the pesticides are suitable for nonfood uses; or because exporters need alternative pesticides to be legally available to meet their export markets' differing requirements. While registering such pesticides may be appropriate to a country's needs, using them on exported produce could result in the produce being refused entry to the United States if FDA detects residues. (See ch. 2.)

## Export Growers' Pesticide Management Practices

In the five countries, the export sectors have assumed responsibility for ensuring that crops exported to the United States meet U.S. pesticide requirements. Multinational firms and their contract growers in all five countries and experienced export growers in Chile and Mexico had access to U.S. information and technical assistance—through their firms, grower associations, or other resources—and they generally used management practices that considered U.S. pesticide requirements. The Chilean exporters' association has distributed information on U.S. requirements for exported fruit to its members since 1980, and it has provided pesticide control plans for certain fruits. In Mexico, the Confederation of Mexican Fruit and Vegetable Growers Associations, with the Ministry of Agriculture, published a comprehensive wall chart in 1987 showing U.S. pesticide requirements for export crops, and it has distributed pesticide spray schedules to some Mexican export areas.

The less experienced, nonmultinational export growers in Costa Rica, the Dominican Republic, and Guatemala have not had ready access to U.S. information or technical assistance and have not used management practices that specifically considered U.S. requirements. The United States does not have tolerances established for pesticides used on some of these countries' export crops—in some cases because the crop is not grown commercially in significant quantities in the United States. Grower/exporter groups in these countries were seeking information on U.S. requirements, and U.S. agencies have been expanding assistance to them. (See ch. 3.)

### U.S. Agency Assistance

EPA and FDA have provided foreign governments and growers with information and technical assistance on request, and EPA has implemented regional technical assistance workshops. In addition, AID and EPA are providing Latin American and Caribbean export growers with information on what pesticides have U.S. tolerances for specific crops and guidance in developing pesticide monitoring for exports. These efforts should prove useful in (1) decreasing the likelihood that U.S. consumers receive produce grown with pesticides lacking U.S. tolerances, (2) helping these countries avoid violations, and (3) preventing economic losses to exporters and U.S. importers. (See ch. 4.)

## Issues for Congressional Consideration

The extent to which, and in what ways, U.S. agencies should increase their involvement in establishing tolerances for imported crops and in increasing the flow of information on U.S. food safety and quality standards are issues that will confront the Congress as it deliberates on both food safety and U.S. competitiveness. These issues also have implications regarding U.S. agencies' responsibilities and resources. Such actions could help developing countries provide U.S. consumers with increased assurance about the safety and quality of imported foods and increase the countries' exports to the United States. However, these actions could also help foreign growers and exporters compete more directly with U.S. producers and processors and increase U.S. agencies' resource needs. (See ch. 5.)

## Agency Comments

GAO discussed the information contained in a draft of this report with responsible EPA, FDA, USDA, and AID officials. Their comments have been incorporated in the report where appropriate. As requested, GAO did not obtain official agency comments on the report.

# Contents

Executive Summary 2

Chapter 1 Introduction 10
Rising Fruit and Vegetable Imports 11
Concerns About Residues on Imported Produce 12
U.S. Safety and Quality Network for Imported Produce 13
International Organizations' Roles in Developing Food Safety Systems 15
Objectives, Scope, and Methodology 15

Chapter 2 Foreign Governments' Efforts to Meet U.S. Safety and Quality Requirements on Exported Produce 20
Government Practices That May Affect Residues on U.S. Produce Imports 21
Controls Over Pesticide Availability and Use 35
Observations 36

Chapter 3 Private Sector Efforts in Five Foreign Countries to Meet U.S. Safety and Quality Requirements 38
Export Growers and Their Pesticide Management Practices 38
Multinational Firms 39
Other Experienced Export Growers 41
Less Experienced Export Growers 49
Observations 52

Chapter 4 U.S. Agencies' Efforts to Assist Foreign Countries in Meeting U.S. Safety Requirements 54
Environmental Protection Agency 54
Food and Drug Administration 56
U.S. Department of Agriculture 58
Agency for International Development 58
Observations 64

## Chapter 5 Issues for Consideration by the Congress

Chapter 5 Issues for Consideration by the Congress 65
Lack of Established Tolerances 65
Information 67
The Challenge 67

## Appendixes

Appendix I: Pesticide Use Per Hectare, by Area or Nation 70
Appendix II: U.S. Produce Imports by Region, 1988 71
Appendix III: Federal Agencies Involved in the U.S. Safety and Quality Network for Imported Produce 72
Appendix IV: International Organizations' Roles in Developing Food Safety Systems 78
Appendix V: Status in Five Countries of Pesticides That Do Not Have EPA Tolerances Established for the Active Ingredients 81
Appendix VI: Major Contributors to This Report 85

## Tables

Table 2.1: Status in Five Countries of Pesticides on EPA's October 25, 1988, Revised List of Canceled and/or Suspended Chemicals 26
Table 2.2: Status in Five Countries of Pesticides on EPA's October 25, 1988, Revised List of Voluntarily Canceled Chemicals of Significance 28
Table 2.3: Number of Pesticide Registrations With No EPA Tolerances in Five Countries 32
Table 2.4: Reasons for No-Tolerance Pesticide Residue Findings for Imported Foods in Fiscal Year 1986 35

## Figure

Figure 2.1: Chilean Pesticide Label 31

## Abbreviations

| | |
|---|---|
| AID | Agency for International Development |
| AMS | Agricultural Marketing Service |
| APHIS | Animal and Plant Health Inspection Service |
| CAAP | Private Industrial and Agriculture Council of Costa Rica |
| CBI | Caribbean Basin Initiative |
| CICP | Consortium for International Crop Protection |
| EPA | Environmental Protection Agency |
| FAO | Food and Agriculture Organization |
| FDA | Food and Drug Administration |
| FFDCA | Federal Food, Drug, and Cosmetic Act |
| FIFRA | Federal Insecticide, Fungicide, and Rodenticide Act |
| GAO | General Accounting Office |
| GREMIAL | Export Federation Guild of Guatemala |
| IICA | Inter-American Institute for Cooperation on Agriculture |
| IR-4 | Inter-Regional Research Project Number 4 |
| JACC/DR | Joint Agribusiness Coinvestment Council, Inc., of the Dominican Republic |
| NTAE | Nontraditional Agricultural Exports |
| OICD | Office of International Cooperation and Development |
| OTA | Office of Technology Assessment |
| PAHO | Pan American Health Organization |
| ROCAP | Regional Office for Central America/Panama |
| UNEP | United Nations Environmental Program |
| UNPH | Confederation of Mexican Fruit and Vegetable Growers Associations |
| USDA | U.S. Department of Agriculture |
| WHO | World Health Organization |

Chapter 1

# Introduction

A rapid increase in fruit and vegetable imports during the 1980s has been accompanied by government and public concern about the safety and quality of such imports, particularly about the presence of pesticide residues. Specifically, questions have been raised about whether residues on imported produce exceed U.S. tolerances and if pesticides banned in the United States are being used on foods exported to the United States.[1]

Pesticides are chemicals or biological substances used to destroy or control weeds, insects, fungi, rodents, and bacteria. Pesticides are a mixed blessing: they enhance agricultural productivity and improve public health through control of disease-carrying pests, but they can adversely affect people, nontarget organisms such as fish and wildlife, and the environment.

Worldwide pesticide sales have dramatically increased: from 1977 to 1987, the worldwide agricultural chemical market doubled in size to more than a $17 billion industry. Developed countries, such as Japan and the United States, have been using increasing amounts of pesticides, and developing countries have been importing progressively more pesticides. According to a 1986 United Nations Food and Agriculture Organization (FAO) publication,[2] Latin American countries[3] —major fruit and vegetable producing countries that export to the United States—were fourth in pesticide amounts used per hectare,[4] after Japan, Europe, and the United States. (See app. I.) The Environmental Protection Agency (EPA) estimates that about half, and sometimes less than half, of most Latin American countries' pesticide imports come from the United States.

While international guidelines on the registration and use of pesticides on food exist, their adoption by individual countries is voluntary. Each country sets its own laws for pesticide registration and use, which vary considerably in sophistication and degree of implementation among countries. The United States can exercise control over pesticide use in other countries only insofar as it identifies residues on food as it enters the United States.

---

[1] A pesticide residue tolerance is the maximum legal level of a pesticide residue that may exist in or on a food. According to Environmental Protection Agency officials, EPA generally sets tolerances so that total dietary intake from all crops is at least 100 times lower than the lowest nontoxic level observed in laboratory exposure tests of animals and so that residues will be unlikely to result in human health/toxicity problems.

[2] Bengt V. Hofsten and George Ekstrom, editors, Control of Pesticide Applications and Residues in Food: A Guide and Directory—1986 (Uppsala, Sweden: Swedish Science Press).

[3] In this report, Latin America refers to the countries of Central and South America.

[4] 1 hectare = 2.47 acres.

## Rising Fruit and Vegetable Imports

In May 1988 we reported that U.S. agricultural imports had generally increased from 1980 through 1986 and that fruit and vegetable imports had risen more quickly than total agricultural imports.[5] Specifically, the report stated that, from 1980 to 1986, U.S. fruit imports tripled and vegetable imports more than doubled in real value. In addition, the import share of the U.S. market for major fresh and frozen fruits rose from about 26 percent to about 33 percent; the share for major fresh vegetables rose from about 5 percent to about 7 percent.

Most U.S. fruit and vegetable imports come from Latin America and the Caribbean—5.5 million metric tons, or 77 percent of the total U.S. imports of fruits and vegetables in 1988. (See app. II.) Together, Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico—the five countries on which this report focuses—accounted for 59 percent of the U.S. import volume from Latin American and Caribbean countries in 1988. Mexico was the principal supplier with 32 percent of these Latin American/Caribbean imports. Other Latin American countries that supplied fruits and vegetables to the United States during 1988 included Colombia, Ecuador, Honduras, and Panama.

Many countries in the Latin American/Caribbean region have emphasized diversification of their agricultural exports in recent years as world prices and demand for many of their traditional export commodities, such as sugar and coffee, have leveled off or declined. Several of these countries are trying to identify new specialty crops, such as asparagus and melons, to fill market niches. The Agency for International Development (AID) is assisting some of these nations in increasing their exports of nontraditional fruits and vegetables, mostly to the United States.[6] (See ch. 4.)

---

[5] Agricultural Trade: Causes and Impacts of Increased Fruit and Vegetable Imports (GAO/RCED-88-149BR, May 10, 1988).

[6] According to an AID official, nontraditional fruits and vegetables are commodities other than traditional plantation crops—coffee, cotton, cacao, and beef—that are produced in very large volume. Nontraditional crops have been produced in the Latin American/Caribbean region for less than 15 to 20 years, generally in response to increased U.S. demand for winter produce.

## Concerns About Residues on Imported Produce

Concerns about the safety and quality of imported produce, which focus mainly on pesticide residues, have been raised by government agencies, environmental groups, and others. In addition, international organizations and environmental groups have recognized the general need for improved food safety systems in developing countries, many of which export fruits and vegetables to the United States and other countries.

In September 1986 we reported that the Department of Health and Human Service's Food and Drug Administration's (FDA) import monitoring program provided limited protection against public exposure to illegal residues in imported food.[7] We said that FDA sampled less than 1 percent of the approximately 1 million imported food shipments each year.[8] In addition, we raised concerns about FDA's limited information about what pesticides foreign countries use. In response to our recommendations, FDA has made changes in its sampling program and taken steps to increase its information on foreign pesticide use. In addition, the Pesticide Monitoring Improvements Act of 1988 (Subtitle G of Title IV of the Omnibus Trade and Competitiveness Act of 1988, P.L. 100-418) required the Secretary of Health and Human Services to improve FDA's data collection and management of information related to pesticide residues in imported and domestically produced foods, including obtaining information on pesticides used on exported foods destined for U.S. markets.

In 1988 the Office of Technology Assessment (OTA) reported that limitations in FDA's analytical methods create problems in enforcing pesticide tolerances on imports because FDA does not test for some pesticides used in foreign countries that are not approved for use in the United States.[9] OTA added that the testing limitations are compounded by FDA's lack of information on what pesticides have been used on specific crops, especially imports.

Environmental groups have also raised questions concerning U.S. knowledge about use of pesticides on U.S. imports. For example, the Natural Resources Defense Council, a national, nonprofit environmental organization, testified before the Subcommittee on Health and Environment, House Committee on Energy and Commerce, in December 1987 on the need for more information on foreign pesticide use. The Council stated that foreign growers may legally purchase and use pesticides whose residues may be illegal if that product is imported into the United States.

---

[7] Pesticides: Better Sampling and Enforcement Needed on Imported Food (GAO/RCED-86-219, Sept. 26, 1986).

[8] A July 1989 staff report by the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce indicated a sampling rate of about 2 percent for fiscal year 1987.

[9] Pesticide Residues in Food: Technologies for Detection, OTA, Oct. 1988.

Broader food safety concerns about imports from Latin America and the Caribbean were discussed at the August 1985 Inter-American Conference on Food Protection, which was convened by the National Academy of Sciences. The conference, which was attended by representatives of North American and most Latin American and Caribbean countries, related to issues concerning the safety of foods both consumed within countries and shipped among countries. The conference report identified several factors that might negatively affect food safety in developing Latin American and Caribbean countries.[10] These factors included economic problems; inadequate government control over food safety; and lack of technical knowledge, advisory services, financial resources, and physical facilities for proper quality assurance. The report concluded that a lack of timely and effective technical and commercial information particularly hinders developing countries' regulatory officials and private industry in making appropriate choices in food safety and quality decisions.

## U.S. Safety and Quality Network for Imported Produce

The U.S. safety and quality network for imported produce involves several federal agencies, as well as states and private industry. At the federal level, EPA registers pesticides and establishes pesticide residue tolerances that all fresh produce and other foods and feeds—whether domestic or imported—must meet to be legally allowed for U.S. consumption. EPA can also establish tolerances—sometimes called import tolerances—for pesticides where there is no registration request and the commodity is being treated outside the United States. It can also grant tolerance exemptions when it determines a tolerance is not necessary to protect the public health.

EPA is required to notify foreign countries about (1) U.S. exports of unregistered chemicals to their countries and (2) EPA actions to cancel or suspend a pesticide's U.S. registration. Pesticides used in foreign countries are not required to be registered with EPA. However, foreign uses of pesticides that do not have an EPA tolerance or an exemption can result in a commodity's rejection at U.S. entry points if residues are detected.

---

[10] Food Protection in the Americas (Washington D.C.: National Academy Press, 1987).

FDA, which is responsible for protecting the U.S. public from unsafe foods and other products, enforces the EPA pesticide residue tolerances for all food products—both domestic and imported—except meat, poultry, and eggs, which are monitored for pesticide residues by U.S. Department of Agriculture (USDA) agencies. FDA is also responsible for identifying imported foods that contain chemical contaminants, have microbial and filth contamination, foreign objects, or that are decomposing. A food shipment is considered adulterated if, among other things, it contains either (1) a pesticide residue that is not subject to an EPA-approved tolerance for that food or (2) a pesticide residue in an amount greater than the EPA tolerance level.

The U.S. Customs Service can deny admission of any food presented for import if the food is adulterated, and it can assess and collect damages if adulterated shipments are not reexported or destroyed. In some cases, previously adulterated food is allowed admission if other action brings it into compliance with U.S. requirements.

USDA is authorized to inspect imported produce to determine its quality. USDA's Agricultural Marketing Service (AMS) administers a mandatory inspection program for quality standards of size, maturity, and grade for certain imported commodities covered by domestic marketing orders.[11] As of March 1988 these commodities were avocados, dates (except dates for processing), filberts, grapefruit, table grapes, limes, olives (except Spanish-style olives), onions, oranges, Irish potatoes, prunes, raisins, tomatoes, and walnuts.[12] AMS also administers a voluntary inspection program for fresh produce that financially interested parties can use. USDA's Animal and Plant Health Inspection Service (APHIS) inspects produce, animals, and other products at U.S. entry points (and conducts inspection, survey, and control activities at some foreign locations) to prevent the introduction of foreign pests and diseases that can harm U.S. agriculture.

The federal agencies' activities are discussed in more detail in appendix III.

---

[11] Marketing orders are marketing plans designed by growers and handlers, and approved by the Secretary of Agriculture, to collectively work out solutions to marketing problems. Marketing orders are issued as federal regulations. Under section 8e of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 608e-1), the marketing orders govern the quality of certain imported commodities during the domestic marketing season.

[12] Legislation before the 101st Congress (H.R. 2026, H.R. 3567, and S. 1729) would add such commodities as kiwi fruit, nectarines, papayas, and plums to the list of imported commodities subject to mandatory inspection.

Although federal agencies are responsible for ensuring the safety and quality of the U.S. food supply, some states may set regulations more stringent than the federal regulations. In addition, some states have established their own pesticide residue testing programs. In the states we contacted—California, Florida, and New York—testing primarily focuses on domestic produce, although imports are also sometimes tested. According to officials in these states, they use EPA tolerances as guidance and rely primarily on federal enforcement activities to monitor pesticide residues on imported fruits and vegetables.

Some supermarket chains and other importers contract for their produce prior to receipt and may indicate general quality specifications for the imported produce in the contract. However, officials of many of the major supermarket chains and other importers with whom we spoke said that they purchase their imported fresh produce on consignment at U.S. entry points. According to these importers, regardless of whether produce is purchased on consignment or under contract, they tend to rely on FDA to determine whether imported fresh produce meets U.S. pesticide tolerances. Some supermarket chains, however, have begun using private testing services to monitor produce for pesticide residues.

## International Organizations' Roles in Developing Food Safety Systems

Several international organizations play important roles in assisting developing countries to develop their food safety control systems. These organizations include the U.N. Food and Agriculture Organization; the U.N. World Health Organization (WHO); the Codex Alimentarius Commission, a subsidiary body of FAO and WHO; the Pan American Health Organization (PAHO); and the Inter-American Institute for Cooperation on Agriculture (IICA). These organizations, whose activities are discussed in more detail in appendix IV, create model food laws, recommend food control regulatory policies, set international standards and guidelines for foods, mobilize resources, and provide technical assistance to individual countries upon request.

## Objectives, Scope, and Methodology

In a September 3, 1987, letter and subsequent discussions with their offices, Representative Leon Panetta, then Chairman, Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition, House Committee on Agriculture, and Representative Frank Horton asked us to (1) obtain information on foreign government and private sector efforts to ensure that imported produce meets U.S. safety and quality standards and (2) determine what federal agencies are doing to assist foreign countries in meeting U.S. safety requirements. In addition, they asked us to discuss federal agencies' responsibilities regarding the safety and quality of imported produce. As agreed, we focused most of our effort on safety standards related to pesticide controls.

To respond to the first objective, we visited five countries in Latin America and the Caribbean between March and October 1988: Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico. We selected these countries for several reasons:

- Latin American and Caribbean countries supply most U.S. imports of fruits and vegetables—77 percent in 1988.
- The five countries together contributed over half of the Latin American/Caribbean volume in 1988.
- Mexico provides most of the fresh vegetables, such as tomatoes, cucumbers, peppers, eggplant, squash, and asparagus, imported into the United States.
- Mexico and Chile accounted for most of the increased U.S. imports of fresh tomatoes, broccoli, and table grapes between 1980 and 1986.

In addition, we considered information, obtained from various sources during preliminary discussions, on the countries' length of experience with fruit and vegetable exports and their varying levels of sophistication in government regulatory programs. Most of the U.S. produce imports from Costa Rica and Guatemala are bananas—about 90 percent and 80 percent, respectively, in 1988. U.S. imports from Mexico and the Dominican Republic are mostly vegetables and other fruits, and imports from Chile are mostly fruit.

In the five countries, we met with government officials responsible for pesticide standards and food safety monitoring; officials of the Costa Rican and Mexican national pesticide commissions; representatives of regional and international organizations, such as FAO, PAHO, and IICA; environmentalists and university experts; representatives of grower and exporter associations; exporters; export growers; representatives of Chile's Chemical Producers Association; and U.S. embassy officials. We also met with FAO, PAHO, and IICA representatives in Washington, D.C. We did not verify all the information obtained from these sources or evaluate the adequacy of food safety and quality activities in the five countries.

For information about the controls these countries' governments use to help ensure that exported produce destined for the United States meets U.S. pesticide tolerances, we interviewed foreign government officials responsible for pesticide registration and use and reviewed applicable laws and regulations; official government lists of registered chemicals; and proclamations, statutes, or other documents relating to the use of pesticides. We also obtained available studies and analyses related to the use of agricultural chemicals in each country and spoke with laboratory personnel in Costa Rica and Guatemala.

To determine if pesticides were legally available for use in the five countries that do not have tolerances established for a food use in the United States, we compared the official government lists of registered pesticides for each of the five countries with lists of active U.S. pesticide tolerances in the U.S. Code of Federal Regulations (40 C.F.R. part 180 and 40 C.F.R. part 185, which was formerly 21 C.F.R. part 193) and information in commercial publications.[13] To determine if these countries had pesticides registered for use, and therefore legally available, that the United States had canceled or suspended, we compared the countries' lists of official pesticide registrations with EPA's Office of Pesticide Programs' October 25, 1988, revised lists of (1) canceled/suspended pesticides and (2) voluntarily canceled chemicals of significance. These lists include pesticides that EPA has identified as having the majority of food uses withdrawn or canceled but do not include all restricted pesticides. We did not verify EPA's definition of the status of these pesticides.

For information on the 5 countries' private sector efforts to meet U.S. pesticide and quality standards for imported produce, we interviewed officials of 5 exporter and grower associations; 18 export growers; 9 exporters; and 22 grower/exporters, of which 5 were multinational firms. We asked about their management practices for determining and using pesticides and for ensuring quality and reviewed the exporter and export growers' pesticide use planning documents, such as spray plans, and pesticide purchase and application records, where available.

The exporters and growers we interviewed produced a variety of fruits and vegetables for export to the United States, including pineapples, strawberries, chayote, and yucca in Costa Rica; bananas, broccoli, sugar peas, and strawberries in Guatemala; tomatoes, strawberries, and watermelon in Mexico; Chinese vegetables, melons, and tomatoes in the Dominican Republic; and grapes and tree fruit in Chile.

---

[13] The lists for Chile, the Dominican Republic, and Guatemala were 1987 lists. Costa Rica's official list was current as of our visit in June 1988, according to Ministry of Agriculture officials. For Mexico, we examined two pesticide lists, one from the Ministry of Agriculture for 1987 and one developed by Mexico's Interministerial Pesticide Commission in 1988, which commission officials told us would supersede all previous lists of official pesticide registrations. In addition, we examined the Ministry of Agriculture's estimate of pesticide consumption for 1988.

We obtained information on Chilean export growers' pesticide management practices primarily from representatives of Chile's exporters' association and from 4 exporters, 16 export growers, and 1 multinational grower/exporter selected from the association's list of exporters. We collected information on Mexican export growers' pesticide management practices primarily from representatives of Mexico's Confederation of Mexican Fruit and Vegetable Growers Associations (UNPH) and from 12 grower/exporters in 4 of Mexico's 5 largest exporting states (Sinaloa, Sonora, Baja California, Michoacan, and Tamaulipas). These 5 states produced 84 percent of Mexico's exports to the United States during the 1987-88 growing season. UNPH selected the Mexican exporters and growers according to our specification of location and crops grown.

In Costa Rica, the Dominican Republic, and Guatemala, we obtained information on export growers' pesticide management practices from exporter and grower associations; five exporters; two individual export growers; nine grower/exporters, of which four were multinational firms; and, in the Dominican Republic, several export growers in a group. The associations are the Private Industrial and Agriculture Council of Costa Rica (CAAP); the Joint Agribusiness Coinvestment Council, Inc., of the Dominican Republic (JACC/DR); and the Export Federation Guild of Guatemala (GREMIAL). We selected exporters and growers in these countries with assistance from USDA's Foreign Agricultural Service agricultural attaches, APHIS officials, and AID officers in the U.S. embassies in these countries.

We analyzed 1986 FDA import violation data to determine the extent and reasons for pesticide violations on imported produce. We also determined the proportion of imported fresh produce that was required to meet minimum quality standards from 1985 through 1987 for each country. We did not determine what proportion of total fresh produce imported from these countries, and inspected by AMS, was rejected, however, because the data were not computerized, and inspection certificates with the rejection data were grouped by port and importer, rather than by country.

To determine what federal agencies were doing to assist foreign countries in meeting U.S safety requirements, we interviewed officials from EPA, FDA, and AID headquarters; the AID regional office for Central America and Panama; and AID bilateral missions in Costa Rica, the

Dominican Republic, and Guatemala. We also reviewed EPA and FDA international program documents, such as workshop records, foreign visitor and training records, and special project documents. We did not verify these activities or evaluate their effectiveness.

To obtain information on federal agencies' responsibilities regarding the safety and quality of imported produce, we reviewed prior GAO reports and agency documents and spoke with officials from EPA, FDA, AMS, and APHIS. APHIS is not directly involved in ensuring the safety or quality of imported fruits and vegetables, but it conducts inspection and quarantine activities at U.S. entry points (and inspection, survey, and control activities at some foreign locations) to identify and prevent the introduction of exotic animal and plant diseases and pests that might threaten U.S. agriculture. We did not verify these agencies' program activities or evaluate their effectiveness.

For information on what some states and private industry were doing to monitor pesticide use on imported produce, we spoke with state department of agriculture officials and reviewed annual reports and other related documents from three states—California, Florida, and New York—and spoke with various importers and supermarket chain representatives.

For additional background information, we visited FDA offices in Philadelphia and Los Angeles and spoke with representatives of the National Food Processors' Association and NutriClean, a private residue-testing service.

We did our work primarily between February and December 1988, with updates as appropriate through February 1990, in Philadelphia, Pennsylvania; Washington, D.C.; California; Chile; Costa Rica; the Dominican Republic; Guatemala; and Mexico. We discussed the information contained in a draft of this report with responsible EPA, FDA, USDA, and AID officials. Their comments have been incorporated in the report where appropriate. However, as requested, we did not obtain official agency comments on this report.

# Foreign Governments' Efforts to Meet U.S. Safety and Quality Requirements on Exported Produce

Like the United States, the governments in the five countries we visited (Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico) do not design their food safety and quality systems—specifically their pesticide registration and monitoring systems—to meet other countries' safety and quality standards, but primarily to address domestic needs and issues. Each of the five countries has laws and regulations controlling pesticide availability and use; however, government monitoring and enforcement activities are generally limited because of a lack of resources.

Each country's need for legally registered pesticides is unique, depending on the climate, crops grown, pest problems, and nonfood-use requirements. A country's export markets may have different pesticides registered for use on a given crop or they may have the same pesticide registered, but for different crops. As a result, an exporting country needs to have a range of pesticides available so that export growers can meet many export markets' pesticide requirements. In addition, an exporting country needs to have information on its export markets' pesticide requirements and quality standards to ensure successful exportation of its produce.

Although the five countries' regulatory systems are not specifically aimed at meeting U.S. import standards, most of the government officials told us that they may cancel, restrict, or not register pesticides that are canceled, restricted, or suspended in the United States, if the information is known. When pesticides that have been canceled or suspended in the United States are prohibited or not registered for use in these countries, it helps decrease the legal availability of such pesticides for use on exported produce. In addition, two of the governments provide information to export growers about U.S. pesticide requirements for specific export crops. Because of the variety of pesticides that different countries may allow for use on a given crop, providing information to export growers on U.S. requirements increases the likelihood that the growers will be able to meet U.S. requirements for their exported produce.

Conversely, the five governments have registered some pesticides that do not have tolerances established in the United States. The legal availability of these pesticides may increase the possibility of their being used on produce exported to the United States. While the reasons these pesticides do not have U.S. tolerances may be other than health-related, imported produce with residues of these pesticides would be considered violative if FDA detects them.

On the matter of quality, government officials in the five countries told us that their governments do not monitor fruits and vegetables to determine whether produce destined for export meets the size, maturity, grade, or other quality standards of their growers' export markets. As with pesticides, exporters are expected to know and meet their export markets' quality requirements.

## Government Practices That May Affect Residues on U.S. Produce Imports

Officials of the five governments we visited told us about a number of practices that affect the legal availability and use of pesticides in their countries, and therefore the presence and composition of pesticide residues on U.S. produce imports from those countries. These practices included (1) registering and reregistering pesticides; (2) considering the U.S. status of pesticides before making registration decisions; (3) having canceled, restricted, or not registered pesticides that do not have U.S. registrations or tolerances; (4) providing information about U.S. pesticide requirements for export crops to growers; and (5) registering pesticides that do not have EPA tolerances.

### Registration Practices

Registration procedures are necessary to provide for the proper and safe use of pesticides and to protect people and the environment from ineffective or detrimental chemicals. Each country we visited had established a pesticide registration system that requires pesticides to be registered before they can be sold or used. With the exception of the Dominican Republic, each country required pesticide registrations to specify crop use.[1]

The five countries' registration processes require registrants (usually chemical manufacturers) to provide much of the same type of information EPA requires for a U.S. registration: the pesticide's name, chemical composition, and use instructions; health and environmental safety studies; and residue information. All five countries use the international maximum residue limits (tolerances) developed by Codex. In the United States, EPA's Office of Compliance Monitoring, in conjunction with FDA, conducts randomly selected inspection audits—usually post-registration—of the laboratory practices used in conducting the scientific studies that support the registration data, according to a former Director of the Registration Division of EPA's Office of Pesticide Programs. However, officials of four of the five countries told us that their governments do not validate the scientific studies presented by the registrants, generally because of a lack of scientific and budgetary resources. Mexican government officials told us that they validate the scientific studies to a limited extent.

---

[1] The Dominican Republic revised its pesticide statute in 1988 to include, among other things, a requirement for a pesticide registration to be crop-specific. At the time of our visit, however, the statute had not received final approval. Ministry of Agriculture officials told us that they expected it would be signed by December 1988.

While the five countries do not generally register pesticides to meet another country's import requirements, we found that the governments have prohibited or not registered many pesticides that the United States has canceled or suspended, usually because of health or environmental concerns. Canceling registration of, restricting use of, or not registering pesticides that are canceled or suspended in the United States help to ensure that these pesticides will not be legally available for use on export crops.

## Considering U.S. Status of Pesticides Before Making Registration Decisions

Foreign government officials told us that, during the registration process, they try to determine the pesticide's status in industrialized countries, including the United States. To do so, they depend primarily on the registrant's providing a certificate of free sale for the country of origin—that is, the registrant's certification that the pesticide is legal for use in the country where it is manufactured. The officials' use of other sources of U.S. pesticide information provided by EPA and Codex varied among the five countries, depending on the officials' degree of access to this information.

Each of the five countries required registrants to submit a certificate of free sale from the country of origin. The amount of information required to be submitted with the certificates, however, varied among the countries. For example, the Dominican Republic requires documentation from a "competent authority" that indicates the pesticide's name and formula, registration number, and date of registration, and an indication of whether the chemical is unrestricted, prohibited, or manufactured for export because it has no commercial use in the country of origin.

Similarly, Costa Rica requires "official documentation showing the registration number, date of registration or renewal, type of formula and concentration." In addition, when a pesticide is not registered in the country of origin, Costa Rica requires documents from the manufacturer or "appropriate authorities" indicating the reason. While documentation issued by a corresponding government agency or competent authority is required, verification by the corresponding government agency in the country of origin was not required in these countries. Mexico's documents indicated that it would accept certification from a third country.

According to some government officials, the free sale certificate assures these governments, to some degree, that because the pesticide has been registered in an industrialized country, the health effects probably have been independently validated. Because the countries we visited generally lack the resources to independently validate the studies described in the chemical companies' application data, government officials depend on these certificates to protect their countries from registration and indiscriminate sale of untested chemicals or chemicals that have been proven unsafe. We did not verify the countries' use of these practices.

Officials of the five countries said that they consider other U.S. sources of information, such as notices under sections 17(a)[2] and 17(b)[3] of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136o(a) and (b)), if available, when making pesticide registration decisions. These notices can be valuable to foreign countries in properly evaluating the risk of registering or continuing use of a pesticide. Chilean officials also said that they have their embassy staff in the United States routinely obtain needed information directly from EPA on the U.S. status of pesticides. Similarly, Costa Rican officials responsible for agricultural pesticide registrations told us that, during the process of making registration decisions on a certain group of pesticides, they had requested and received some additional information from EPA.

Although government officials in each country except Chile and Mexico (who said they already received enough information) expressed interest in consistently obtaining information on U.S. pesticide standards and changes in pesticide status, this information is not always readily available. In an April 1989 report,[4] we said that EPA had not issued notices to foreign governments for all pesticides where significant action had been taken and that EPA's 1985 booklet entitled Suspended, Cancelled, and Restricted Pesticides was outdated. We said that the type of information in this booklet, if updated and disseminated, would be sufficient to alert countries using the included pesticides to initiate actions or request additional data as a basis for making their own risk/benefit analysis concerning use. The booklet also serves as a reference document on past U.S. actions.

---

[2] Section 17(a) establishes notification requirements for the export of pesticides that are not registered for domestic use in the United States. In a series of steps, the foreign purchaser must acknowledge, and the government is subsequently notified, that the pesticide is not registered and cannot be sold for use in the United States.

[3] Section 17(b) requires EPA to notify foreign governments and appropriate international agencies about significant changes in a pesticide's U.S. status, such as cancelation or suspension. The notices generally contain information on when EPA took the action, background on what precipitated the action, an explanation of the action, and the basis EPA had for taking the action. The notices also identify EPA contacts from which foreign governments can request additional information on the affected pesticide and registered products that could be used in lieu of the pesticide.

[4] Pesticides: Export of Unregistered Pesticides Is Not Adequately Monitored by EPA (GAO/RCED-89-128, Apr. 25, 1989).

We recommended that EPA (1) develop criteria and procedures for determining whether and when to prepare and issue notices of regulatory action (sec. 17(b) notices); (2) annually update and issue to all concerned parties, including foreign governments, its booklet entitled Suspended, Cancelled, and Restricted Pesticides; and (3) establish guidance on 17(a) transmittal procedures for sending notices to foreign governments and coordinate with the Department of State in updating and sending 17(a) and 17(b) notices to U.S. embassies. We believe that these improvements would enhance foreign governments' efforts to use established information on pesticides from other countries in making their pesticide use decisions.

On February 12, 1990, EPA published a Federal Register notice on proposed changes to its notification process. The notice cited our report's recommendations and issues discussed during May 1989 hearings on pesticide exports before the House Subcommittee on Environment, Energy, and Natural Resources, as reasons for the proposed changes.

## Reregistration Practices

Each of the five governments' regulations provided for (1) reregistration procedures or reviews and/or (2) procedures for revoking a pesticide's registration when adverse health, safety, or environmental factors become known. These countries—like the United States—do not always remove canceled pesticides from registration lists and commerce at the time of cancelation. As a result, pesticides that are officially not approved for use in a country may sometimes be legally found in distribution channels.

According to the former Director of the Registration Division of EPA's Office of Pesticide Programs, EPA determines how long a pesticide can remain in commerce and use in the United States on a case-by-case basis as a result of a risk/benefit determination made during the review process to determine whether a pesticide should be canceled. In most cases, if no immediate health risk exists or if cancelation is due to financial decisions, EPA may allow a pesticide to stay in distribution channels for a specified time. However, if a pesticide's registration is suspended on an emergency basis, EPA prohibits sale or use of the pesticide concurrently with the suspension.

The countries we visited handled the availability of recently prohibited pesticides in various ways. For example, some countries' regulations, such as the Dominican Republic's and Costa Rica's, specify that if a chemical is voluntarily canceled by a manufacturer, the registration will be maintained for 2 years until existing stocks are used. In Mexico, when officials determine that a pesticide should be removed from the official pesticide list, it is still legal for use for 2 years. In Guatemala and the Dominican Republic, pesticides that have had their registrations canceled are allowed to remain in commercial channels for a time to allow existing supplies to be depleted.

In Guatemala, for example, 18 pesticides were canceled in 1987. As of May 1988 its list of registrations continued to include several of these chemicals because, according to government officials, they gave the chemical companies 6 months to sell existing stocks, and use of these pesticides was to be allowed to continue until supplies were exhausted. Similarly, the Dominican Republic canceled a series of pesticides during the 1970s; some, however, had not been removed from the government's list of registered products as of October 1988. For example, distribution and sale of the pesticide 2,4,5-T is prohibited; yet the chemical's registration was still listed in 1988.

## Canceling or Restricting Pesticides That Are Illegal in the United States

In the countries we visited, a number of pesticides that EPA has canceled or suspended in the United States, or that chemical manufacturers have voluntarily canceled, have also been prohibited from importation, sale, and use; have had their uses restricted; or are not registered. As a result, the legal availability of such pesticides is limited, decreasing the likelihood that they will be used on exported produce.

Table 2.1 shows the 1988 registration status in the five countries of 26 pesticides whose U.S. registrations EPA had canceled and/or suspended, for various reasons, as of October 25, 1988. As the table shows, the five governments have prohibited, restricted, or not registered many of these pesticides.

**Table 2.1: Status in Five Countries of Pesticides on EPA's October 25, 1988, Revised List of Canceled and/or Suspended Chemicals**

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Aldrin[a] | P/L | P | P | P | NR |
| Aspon | NR | NR | NR | NR | NR |
| Brominated salicylanilide | NR | NR | NR | NR | NR |
| Carbophenothion[b] | NR | NR | R | NR | R |
| Chlordane[a]/ Heptachlor[c] | P | R | RS[d] | P/L | R |
| Cycloheximide[b] | NR | NR | NR | NR | NR |
| DBCP (dibromochloropropane) | NR | P | P/L | P/L | NR |
| DDD (TDE) (1,1-dichloro-2,2 bis [p-chlorophenyl] ethane) | NR | NR | NR | NR | NR |
| DDT (dichloro diphenyl trichloroethane) | P | P | NR | P | R[e] |
| Demeton[b] | NR | NR | NR | NR | NR |
| Dialifor[b] | NR | NR | NR | NR | NR |
| Dieldrin[a] | P/L | P | P/L | P | NR |
| Dinitramine[b] | NR | NR | NR | NR | NR |
| Dinoseb[b] | NR | P | NR | P/L | NR |
| EDB[b] (ethylene dibromide) | P | P | P | P | R |
| Fenaminosulf | R | R | NR | R | NR |
| Fluchloralin[b] | NR | NR | R | NR | NR |
| Kepone (Chlordecone) | NR | P | RS | NR | NR |
| Mirex | NR | NR | NR | R | NR |
| Monuron TCA (trichloroacetic acid) | NR | NR | NR | NR | NR |
| Perfluidone[b] | NR | NR | NR | NR | NR |
| Potassium permanganate | NR | NR | NR | NR | NR |
| Silvex[b] | NR | P | NR | NR | NR |
| 2,4,5-T (2,4,5-trichlorophenoxy-acetic acid) | NR | P | P/L | P/L | NR |
| Thiophanate | NR | NR | NR | NR | NR |
| Toxaphene[b] | NR | P | NR | P/L | R |

Legend

NR = Not registered for use

P = Prohibited or suspended

P/L = Prohibited, not removed from country's list of registered pesticides

R = Registered for use

RS = Restricted

[a] EPA has action levels (see table 2.4, note a) for this pesticide

[b] EPA has a tolerance(s) for this pesticide

[c] EPA has tolerances and action levels for this pesticide

[d] The Dominican Republic permits use only for termites

[e] Mexico's health ministry uses DDT to control malaria

Source: EPA's Office of Pesticide Programs' Oct. 25, 1988, revised list of canceled and/or suspended chemicals; official pesticide registration documents, statutes, resolutions, and proclamations from five countries; 40 C.F.R. parts 180 and 185 (revised as of July 1, 1989); and The Pesticide Chemical News Guide (Washington, D.C.: Louis Rothschild, Jr.), June 1, 1988.

Of the 26 pesticides on EPA's list, 17, or 65 percent, were either prohibited or not registered in all 5 countries. Chile had not registered or had prohibited use of 25 of the 26 pesticides, or 96 percent; Costa Rica and Guatemala, 24, or 92 percent; the Dominican Republic, 22, or 85 percent; and Mexico, 21, or 81 percent.

Among the 5 countries, Mexico had the most pesticides registered of the 26 that had been canceled or suspended in the United States. However, one of the pesticides, heptachlor, which was previously registered for use in the Ministry of Agriculture's catalog of approved chemical uses, is not listed as registered in the new Official Catalog of Registered Chemicals for Mexico, published by the Interministerial Pesticide Commission in 1988. According to Mexican Ministry of Health officials, the chemical is no longer going to be allowed to be used in Mexico. However, as mentioned earlier, pesticides may still be legally sold and used in Mexico for 2 years after they have been removed from the registration list.

In addition to EPA's canceling or suspending registrations because of health or environmental concerns, registrations may be voluntarily withdrawn by manufacturers. Table 2.2 shows the 1988 registration status in the five countries of 26 pesticides that EPA had included on its October 25, 1988, revised list of voluntarily canceled chemicals of significance. As the table shows, the five governments have also prohibited or not registered many of these pesticides.

---

Chemical manufacturers cancel chemical uses for various reasons, including health and/or economic reasons.

**Table 2.2: Status in Five Countries of Pesticides on EPA's October 25, 1988, Revised List of Voluntarily Canceled Chemicals of Significance**

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Acrylonitrile | NR | NR | NR | NR | NR |
| Arsenic trioxide | NR | NR | NR | NR | NR |
| Benzene (all products) | NR | NR | NR | NR | NR |
| BHC (benzene hexachloride) | NR | NR | NR | P | R |
| Captafol[a] | R | R | R | R | R |
| Carbon tetrachloride | NR | NR | R | NR | NR |
| Chloranil | NR | NR | NR | NR | NR |
| Copper acetoarsenite | NR | NR | NR | NR | NR |
| Copper arsenate (basic) | NR | NR | NR | NR | NR |
| Cyhexatin[a] | R | R | NR | NR | R |
| Endrin[b] | P | R | P/L | P | NR |
| EPN[a] (O-ethyl O-p-nitrophenyl phenylphosphonothioate) | NR | NR | R | R | R |
| Erbon | NR | NR | NR | NR | NR |
| Hexachlorobenzene | NR | NR | NR | NR | NR |
| Lead arsenate[a] | NR | NR | NR | NR | NR |
| Monuron | NR | NR | NR | NR | NR |
| Nitrofen (TOK[c]) | NR | P | R | NR | NR |
| OMPA (Octamethylpyro-phosphoramide) | NR | NR | NR | NR | NR |
| Pentachlorophenol (some nonwood uses continue) | NR | NR | NR | RS | R |
| Perthane | NR | NR | NR | NR | NR |
| Phenarsazine chloride | NR | NR | NR | NR | NR |
| Ronnel[a] | NR | NR | NR | NR | NR |
| Safrole | NR | NR | NR | NR | NR |
| Sodium arsenite[a] | NR | NR | NR | NR | NR |
| Strobane | NR | NR | NR | NR | NR |
| Trysben | NR | NR | NR | NR | NR |

Legend

NR = Not registered for use

P = Prohibited

P/L = Prohibited; not removed from country's list of registered pesticides

R = Registered for use

RS = Restricted

[a] EPA has a tolerance(s) for this pesticide

[b] EPA has tolerances and action levels for this pesticide

[c] Trade name

Source: EPA's Office of Pesticide Programs' Oct. 25, 1988, revised list of voluntarily canceled chemicals of significance; official pesticide registration documents, statutes, resolutions, and proclamations from five countries; 40 C.F.R. parts 180 and 185 (revised as of July 1, 1989); and The Pesticide Chemical News Guide, June 1, 1988

Of the 26 pesticides whose U.S. registrations had been voluntarily canceled, 18, or 69 percent, were either prohibited or not registered in all 5 countries. Chile had not registered or had prohibited use of 24 of the 26 pesticides, or 92 percent; Costa Rica and Guatemala, both 23, or 89 percent; the Dominican Republic, 22, or 85 percent; and Mexico, 21, or 81 percent.

## Providing Information on U.S. Pesticide Requirements

In each country, government officials emphasized that they believed that most export growers, particularly multinational firms and growers affiliated with national grower or exporter associations, independently obtain information on U.S. standards and are therefore unlikely to export produce that does not meet U.S. requirements. According to Chilean and Mexican officials, however, their governments also provide information on U.S. pesticide requirements to export growers, which assists them in making decisions about pesticide use on their export crops. The Chilean government, through pesticide labels, provides information to its growers on U.S. pesticide tolerances for specific crops. The Mexican government coordinates with a national association to provide U.S. information through a wall chart, which the association distributes to export growers.

Government officials in Costa Rica, the Dominican Republic, and Guatemala said that while they would like to be able to provide information on the United States' and other countries' requirements to their growers, they have not obtained adequate regulatory information on U.S. pesticide standards, such as 40 C.F.R. part 180, or other comprehensive commercial publications that incorporate U.S. regulations. They also said that it was primarily the export growers' responsibility to know and meet both the safety and quality requirements of their markets—as it is in the United States.

## Chile Provides Information on U.S. Pesticide Requirements on Pesticide Labels

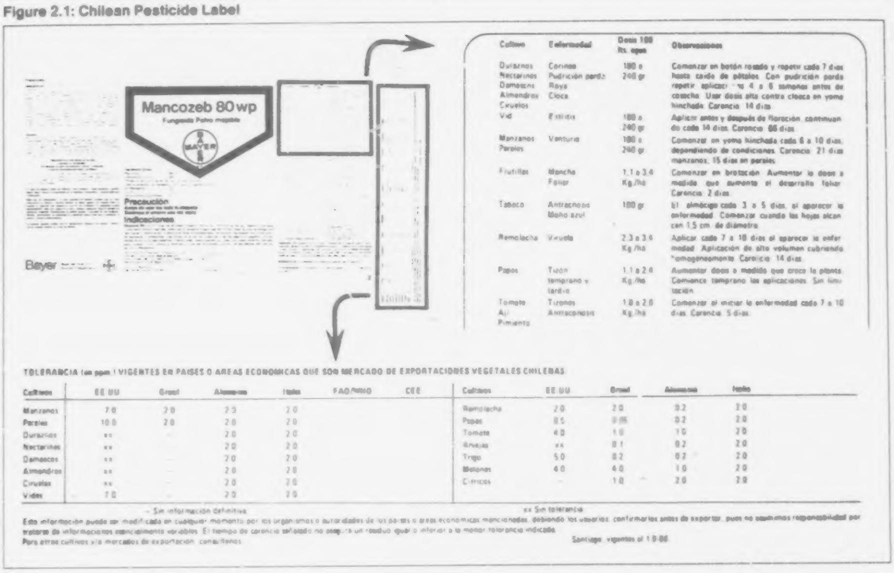
To assist its export growers in meeting the United States' and other countries' import requirements, the Chilean government requires information about major export markets' pesticide requirements, by crop, to be included on pesticide labels. Chilean officials gather information on export market requirements, particularly on tolerances and preharvest intervals,[6] as part of the registration process. Chilean regulations require this information to be printed on the label in addition to the standard information on precautions, composition, hazard, and use.[7] Further, Chilean regulations require a change in the pesticide label whenever the listed export markets' registration status changes. Figure 2.1 shows the Chilean label for the fungicide Mancozeb 80, with the highlighted portions showing use and tolerance information.

---

[6] Preharvest interval is the time in days required after application before an agricultural crop may be harvested to ensure that residues remaining are within legal tolerances.

[7] All five governments—in a standardization effort with other countries in the region—are changing their label format to try to reduce the misuse of pesticides. Each of the countries has adopted the FAO/WHO label format, in which the left side of the label lists precautions, the center contains information on the pesticide's chemical composition and a hazard sign, and the right side shows use information.

Figure 2.1: Chilean Pesticide Label


Mancozeb 80 wp
Fungicida Polvo mojable
BAYER
Precaución
Indicaciones
Bayer

| Cultivo | Enfermedad | Dosis 100 lts. agua | Observaciones |
|---|---|---|---|
| Duraznos<br>Nectarinos<br>Damascos<br>Almendros<br>Ciruelos | Corineo<br>Pudrición parda<br>Roya<br>Cloca | 180 a 240 gr | Comenzar en botón rosado y repetir cada 7 días hasta caída de pétalos. Con pudrición parda repetir aplicaciones 4 a 6 semanas antes de cosecha. Usar dosis alta contra cloaca en yema hinchada. Carencia: 14 días |
| Vid | Botritis | 180 a 240 gr | Aplicar antes y después de floración, continuando cada 14 días. Carencia: 66 días |
| Manzanos<br>Perales | Venturia | 180 a 240 gr | Comenzar en yema hinchada cada 6 a 10 días, dependiendo de condiciones. Carencia: 21 días manzanos; 15 días en perales |
| Frutillas | Mancha Foliar | 1.1 a 3.4 Kg./há | Comenzar en brotación. Aumentar la dosis a medida que aumente el desarrollo foliar. Carencia: 2 días |
| Tabaco | Antracnosis<br>Moho azul | 180 gr | El almácigo cada 3 a 5 días, al aparecer la enfermedad. Comenzar cuando las hojas alcancen 1.5 cm. de diámetro |
| Remolacha | Viruela | 2.3 a 3.4 Kg./há | Aplicar cada 7 a 10 días al aparecer la enfermedad. Aplicación de alto volumen cubriendo homogéneamente. Carencia: 14 días |
| Papas | Tizón temprano y tardío | 1.1 a 2.4 Kg./há | Aumentar dosis a medida que crece la planta. Comience temprano las aplicaciones. Sin limitación |
| Tomate<br>Ají<br>Pimiento | Tizones<br>Antracnosis | 1.8 a 2.8 Kg./há | Comenzar al iniciar la enfermedad cada 7 a 10 días. Carencia: 5 días |

TOLERANCIA (en ppm.) VIGENTES EN PAISES O AREAS ECONOMICAS QUE SON MERCADO DE EXPORTACIONES VEGETALES CHILENAS

| Cultivos | EE.UU. | Brasil | Alemania | Italia | FAO/OMS | CEE |
|---|---|---|---|---|---|---|
| Manzanos | 7.0 | 2.0 | 2.5 | 2.0 | | |
| Perales | 10.0 | 2.0 | 2.0 | 2.0 | | |
| Duraznos | xx | – | 2.0 | 2.0 | | |
| Nectarinos | xx | – | 2.0 | 2.0 | | |
| Damascos | xx | – | 2.0 | 2.0 | | |
| Almendros | xx | – | 2.0 | 2.0 | | |
| Ciruelos | xx | – | 2.0 | 2.0 | | |
| Vides | 7.0 | – | 2.0 | 2.0 | | |

| Cultivos | EE.UU. | Brasil | Alemania | Italia |
|---|---|---|---|---|
| Remolacha | 2.0 | 2.0 | 0.2 | 2.0 |
| Papas | 0.5 | 0.05 | 0.2 | 2.0 |
| Tomate | 4.0 | 1.0 | 1.0 | 2.0 |
| Arvejas | xx | 0.1 | 0.2 | 2.0 |
| Trigo | 5.0 | 0.2 | 0.2 | 2.0 |
| Melones | 4.0 | 4.0 | 1.0 | 2.0 |
| Cítricos | – | 1.0 | 2.0 | 2.0 |

– Sin información definitiva

xx Sin tolerancia

Esta información puede ser modificada en cualquier momento por los organismos o autoridades de los países o áreas económicas mencionadas, debiendo los usuarios confirmarlas antes de exportar, pues no asumimos responsabilidad por tratarse de informaciones esencialmente variables. El tiempo de carencia señalado no asegura un residuo igual o inferior a la menor tolerancia indicada.

Para otros cultivos y/o mercados de exportación, consúltenos.

Santiago, vigentes al 1.9.86

As figure 2.1 shows, the label lists use information to the right of the name block and the tolerances for specific crops and export markets on the far right. For example, for the pest, corineo, on peaches (duraznos), the label recommends 180 units of Mancozeb 80 in 100 liters of water per hectare, repeated every 7 days. The export market tolerances reveal that the United States (EE.UU.) has not set a tolerance for Mancozeb 80 on peaches, alerting the Chilean export grower that use on peaches would be unacceptable if the peaches are intended for the U.S. market. At the same time, the label shows that Mancozeb 80's use would be acceptable if the peaches were intended for the German or Italian market.

## Mexico Provides Information on U.S. Requirements Through a Wall Chart

In 1987 the Mexican Ministry of Agriculture and UNPH—the Confederation of Mexican Fruit and Vegetable Growers Associations—jointly published a wall chart for export growers, to provide all chemical/crop combinations and corresponding U.S. residue tolerances for Mexican export crops. According to Mexican officials, the chart was the first comprehensive document of U.S. regulations compiled specifically for Mexican export growers. As discussed in chapter 3, this chart generally provides Mexican export growers with the information needed to meet U.S. pesticide tolerances on their export crops.

## Pesticides Registered Without EPA Tolerances

We identified 110 pesticides registered in 1 or more of the 5 countries as of 1987 or 1988 (see ch. 1, fn. 13) that do not have tolerances established for a food use in the United States. In some cases, the countries may have registered these pesticides (1) because of their specific pest problems, crops, and overall climatic conditions; (2) because the pesticides are suitable for nonfood uses; and/or (3) because exporters must have alternative pesticides legally available to them to meet the differing requirements of their export markets. While registering these pesticides may be appropriate to the countries' needs, use of any of the 110 pesticides on produce destined for export to the United States could result in no-tolerance violations, and the produce could be refused entry if FDA detects them. In some cases, EPA may not have evaluated these pesticides or may have denied a U.S. tolerance or registration.

The 110 pesticides we identified are detailed in appendix V. Table 2.3 shows the number of such pesticides for each of the five countries.

**Table 2.3: Number of Pesticide Registrations With No EPA Tolerances in Five Countries**

| Country | Number |
|---|---|
| Chile | 24 |
| Costa Rica | 42 |
| Dominican Republic | 50 |
| Guatemala[a] | 37 |
| Mexico | 35 |
| **Total** | **188**[b] |

[a] Guatemalan registration data included about 75 products whose active ingredients were not identified; these products are not considered in this calculation.

[b] Because some pesticides are registered in more than one country, the total exceeds 110.

Source: Pesticide registration lists for Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico.

## Most Violations on Imported Produce Are No-Tolerance Violations

According to FDA reports, FDA data have consistently shown that most pesticide residue violations on imported produce involve no-tolerance violations rather than residue levels that exceed EPA tolerance levels. No-tolerance violations result when FDA detects residues of pesticides that do not have U.S. tolerances established for use on a particular crop in the United States. Over-tolerance violations result when pesticide residues exceed EPA's established tolerances and most often occur because of pesticide misuse, unusual weather conditions, or poor agricultural practice, according to FDA.

Each of the five countries has experienced no-tolerance violations on produce exported to the United States. In many cases, U.S. tolerances had not been established for the specific export crop, although a tolerance may have been established for a related crop. The effect of not having tolerances established for certain crops may be particularly severe for Costa Rica, Guatemala, and the Dominican Republic, which are trying to improve their economies through increased exports of nontraditional fruits and vegetables, such as chayote, yucca, and some Chinese vegetables. These commodities either are not grown or are not grown commercially in significant quantities in the United States and tend to have few, or no, U.S. tolerances. As a result, these countries' growers may face rejection of their produce at U.S. entry points because of potential no-tolerance pesticide violations. The following examples illustrate what happens when U.S. tolerances have not been established for specific crops:

- A representative of a chayote cooperative in Costa Rica told us that to control pests on its growers' crops, the cooperative was using a selection of chemicals that do not have U.S. tolerances for chayote. However, the chemical companies and the Costa Rican Agriculture Ministry had assured them these chemicals would break down in 4 days and therefore not leave residues on their exported chayote. The representative told us that the cooperative's growers were using these pesticides because EPA had not registered any chemicals or established any tolerances for any pesticide's use on chayote, and fungus problems, if not controlled, would result in severe economic loss.
- While EPA has set a tolerance level for permethrin residues on bell peppers, the tolerance does not extend to other specialty peppers. In 1986 Mexico experienced over 30 no-tolerance violations for permethrin residues that were detected on Mexican serrano, poblano, caribe, and other peppers. The residue levels were below the tolerance level for bell peppers but were in violation because tolerances had not been set for these particular specialty peppers.

- The Dominican Republic experienced many no-tolerance violations in 1987 and 1988 on imported fresh produce, including eggplant, peppers, squash, and snow peas. As was the case with the Mexican peppers, U.S. tolerances had been established for the pesticides on other food commodities, but not on the foods cited for violation. In December 1988 FDA ordered automatic detention of all shipments of long beans, snow peas, peppers, and fuzzy squash from the Dominican Republic because of the number of no-tolerance violations.[8] In correspondence with Dominican Republic government officials, FDA officials noted that while the pesticides identified are not permitted for use in the United States on the violative imported crops, most often they are legal in the United States for use on other crops.

FDA import monitoring data show the extent of no-tolerance violations on imported produce. In fiscal years 1986 and 1987, FDA's inspection of fresh produce imports found 256 violations out of 5,676 samples, or 4.5 percent, and 427 violations out of 8,016 samples, or 5.3 percent, respectively. Of these violations, 230, or 90 percent, in 1986,[9] and 390, or 91 percent, in 1987, occurred because U.S. tolerances had not been established for the food commodities sampled. The remainder resulted from residues that exceeded established EPA tolerance levels. In 1986 about two-thirds of the no-tolerance violations involved pesticides that had U.S. tolerances for commodities, including fruits and vegetables, other than the type cited for violation. (See table 2.4.) We did not make a similar analysis for other years.

---

[8] Under automatic detention, subsequent shipments of designated products are not permitted to enter the United States unless the shipper or importer can provide a valid certificate of analysis showing that the product does not contain illegal residues of the cited pesticides.

[9] Of these 230 violations, 8 involved 2 or more pesticide residues making a total of 241 violative pesticide residue findings.

**Table 2.4: Reasons for No-Tolerance Pesticide Residue Findings for Imported Foods in Fiscal Year 1986**

| | Violations | |
|---|---|---|
| **Reason for violation** | **Number** | **Percent** |
| The pesticide had a U.S. tolerance for one or more fruits, vegetables, and/or other commodities, but not for the commodity cited for violation | 155 | 64 |
| The pesticide was not registered for any use in the United States, or the pesticide was registered, but no tolerances had been established for a food use application | 72 | 30 |
| The pesticide was canceled or severely restricted in the United States, and previous food use tolerances were revoked[a] | 14 | 6 |
| **Total** | **241** | **100** |

[a] For enforcement purposes, EPA has established action levels for canceled or severely restricted pesticides because several of these chemicals can persist in the environment for many years. Action levels are regulatory limits at or above which FDA generally can take legal action to remove foods from commerce. On Feb. 19, 1988, FDA announced in the Federal Register (53 Fed. Reg. 5043) that, in response to a court ruling, action levels were not binding on FDA, industry, or the courts, although they could be used as guidelines. In 10 of these 14 cases, the residue levels present in the violative samples were below action levels for commodities in the same or other food groups.

Source: Our analysis of FDA fiscal year 1986 import monitoring data.

As table 2.4 shows, almost two-thirds of the no-tolerance residue findings for the import violations in 1986 involved pesticides with U.S. tolerances for other commodities, including fruits and vegetables, but not for the commodities cited for violation. In such cases, the residue findings may not necessarily be indicative of pesticide misuse or poor agricultural practice. In addition, of the 72 residue findings in the second category, 66 involved a single pesticide—procymidone—on grapes from Chile, Italy, New Zealand, and South Africa.

## Controls Over Pesticide Availability and Use

According to FAO guidelines, monitoring and enforcement activities are needed to help ensure the integrity of governments' pesticide registration systems and to help prevent the illegal use of pesticides and the resultant risks to health and the environment. The guidelines state that monitoring and enforcement programs should verify that only legal, properly registered products or their components are imported and that chemicals offered for sale have the exact formulations indicated on container labels. In addition, the guidelines specify that after registering a product, governments should exercise control over residues found in food for the protection and reassurance of the consumer and to ensure the acceptability of agricultural commodities in trade.

Government officials in each of the countries except Chile told us that government monitoring and enforcement activities, particularly monitoring pesticide availability and field sampling for residue testing, were generally limited because of such resource constraints as lack of inspectors, lack of transportation to monitor distributors and perform field sampling, and inadequate residue testing facilities. Subsequent to our visit, Chilean officials indicated in an FAO survey that they believed that adequate resources were available in their country to effectively manage the availability, distribution, and use of pesticides.[10]

While the officials told us that their countries had few monitoring resources, we found that limited residue testing had been done for domestic crops in Mexico, Chile, Costa Rica, and Guatemala and that, in some cases, university and government laboratories had provided residue testing to export growers for a fee. Some of the countries were seeking assistance in improving their laboratory capabilities. For example, Costa Rican officials told us that they were seeking FAO funding for increased laboratory facilities and that an FDA representative had been detailed through PAHO to work with Costa Rica's Ministry of Health to improve laboratory testing capabilities. In addition, Mexico informed FDA in May 1988 of plans to establish regional laboratories that will provide a variety of analytical services, including pesticide residue testing of both imported and exported products.

## Observations

Because each country registers pesticides on the basis of its own climate, crops, and pest problems, an exporting country faces a maze of pesticide requirements that may differ from its own and that may not necessarily be health-related. These variations can particularly affect developing countries that are trying to increase exports but have few resources available to identify the differences between countries' pesticide/crop combinations and tolerances. Many countries, such as the United States, have complex systems of pesticide registration and tolerance-setting, and their tolerances are not always the same as international Codex maximum residue limits, which the newer exporting countries we visited have adopted. In addition, the exporting countries may have different pesticides registered for use on a given crop, or they may have the same pesticide registered, but for use on different crops.

---

[10] Response to Questionnaire to Governments on the International Code of Conduct on the Distribution and Use of Pesticides, FAO, Rome, Jan. 1989.

To more effectively compete in world agricultural markets and deal with the maze of requirements and systems, export growers and exporters need to obtain more information on other countries' requirements. The governments in the countries we visited expect export growers and exporters to take primary responsibility to know and meet the importing requirements of their export markets. Most of these governments have resource constraints that affect their ability to obtain and disseminate information on other countries' requirements and to conduct monitoring and enforcement activities relating to pesticide availability and use.

In most cases, government officials told us that their countries lacked information about U.S. requirements. However, in two of the five countries, the governments had taken action to provide their export growers with information about U.S. pesticide requirements, which assists their growers in making appropriate decisions on pesticide use for their export crops. Government officials in the other three countries expressed interest in obtaining more information on U.S. import requirements but, at the time of our review, had not yet established the necessary information networks. U.S. agencies are assisting some countries' export growers in obtaining information about U.S. pesticide requirements. These efforts are discussed in chapter 4.

Despite a general lack of information about U.S. pesticide/crop requirements, the countries we visited had prohibited or not registered most of the 52 pesticides listed in tables 2.1 and 2.2, which the United States had canceled or suspended as of October 1988 either through EPA's regulatory action or through voluntary cancelation by chemical manufacturers. While such pesticides are not legally available in these countries, constraints in monitoring and enforcement capabilities may contribute to lingering concern that these pesticides, although not legally sanctioned, may be available for use on domestic and exported produce.

Chapter 3

# Private Sector Efforts in Five Foreign Countries to Meet U.S. Safety and Quality Requirements

The governments in the five countries do not design food safety and quality systems to ensure that exports meet U.S. safety and quality standards. Moreover, the governments expect growers and exporters to take primary responsibility to know and meet such standards. Exporters and export growers in these countries try, to varying degrees, to ensure that fruit and vegetable exports meet U.S. pesticide residue requirements. The extent to which the exporters and growers are able to do this, however, generally depends on their length of experience in exporting produce and on access to information and technical assistance.

Multinational firms, their contract growers, and other experienced export growers are more likely than less experienced export growers to use pesticide management practices that consider U.S. pesticide requirements. Multinational firms' and experienced export growers' practices are most often directed by the policies, information, and technical services provided by their firms or by older, national exporter/grower associations. The less experienced export growers are generally affiliated with newer grower/exporter associations, which have fewer support services in place to assist export growers in meeting their export markets' pesticide requirements. Growers who produce for domestic consumption are governed by their countries' safety and quality requirements only and do not have an economic incentive to be part of an information network or to develop management practices that ensure compliance with the United States' or other countries' requirements.

On the matter of quality, the exporters determine what the quality of exported produce should be largely on the basis of their knowledge of the importing countries' quality requirements and changing market demands. Most of the export growers and exporters we spoke with were aware of U.S. marketing order requirements and tended to sort produce for export to the United States according to these minimum requirements and/or importer specifications—either verbal or written. Representatives of multinational firms told us that their companies' standards are further dictated by their assessment of customer preferences.

## Export Growers and Their Pesticide Management Practices

Within the five countries, the export sectors have assumed responsibility for ensuring that their crops exported to the United States meet U.S. pesticide requirements. The fruit and vegetable growers in the export sectors include (1) experienced multinational firms; (2) other experienced growers affiliated with older, national exporter/grower associations (Chile and Mexico); or (3) less experienced export growers affiliated with newly organized, national associations (Guatemala, Costa Rica, and the Dominican Republic).

The export growers we contacted told us of a variety of pesticide management practices that many of them used to help meet U.S. pesticide requirements for fresh fruits and vegetables. These practices included the following:

- Obtaining available information on EPA pesticide tolerances for produce destined for export to the United States.
- Developing pest control plans consistent with the information on EPA requirements.
- Supervising pesticide selection and application and creating and monitoring crop- or field-specific records of chemicals purchased, received, and used (including pesticide used, field location, dosage, and date).
- Performing routine or periodic residue testing to ensure that pesticide residues on exported produce do not exceed U.S. tolerances.
- Enforcing pest control plans.

However, not all export growers had used each practice or used specific practices to the same degree. Multinational firms in each country and experienced export growers in Chile tended to have most of these management practices in place. In Mexico, experienced export growers varied in terms of the number of practices they used. However, they tended to use practices that were more consistent with U.S. pesticide requirements, while the practices of the less experienced export growers in the other countries—Guatemala, Costa Rica, and the Dominican Republic—usually did not. The following sections discuss, for each type of grower, the extent to which pesticide management practices that consider U.S. requirements had been or were being used.

## Multinational Firms

According to the five multinational firms we contacted in Chile, Costa Rica, the Dominican Republic, and Guatemala, management practices were in place to help ensure that their exported produce meets U.S. safety and quality standards because U.S. detention of their produce could result in serious revenue loss. The commodities they export, such as bananas, pineapples, melons, apples, grapes, and peaches, are grown either by the firms' employees on company-owned land or by contract growers. These firms generally implement management practices through internal controls. These controls include pest control plans based on U.S. pesticide regulatory information and monitoring practices to ensure compliance with the plans.

## Information on U.S. Import Requirements Is Applied in Pesticide Management Plans

Each of the five multinational firms had written pest control plans that, according to their officials, were consistent with EPA pesticide standards for commodities exported to the United States. Four of the firms had used U.S. regulatory information on U.S. pesticide requirements, and the fifth had used technical publications, to develop and update their written plans. These plans, which deal with anticipated pests and disease, cover each crop the firms handle and specify the chemicals permitted, dosage, frequency of use, and preharvest interval.

For example, one multinational firm exporting bananas and pineapples from Guatemala and Costa Rica provides lists of approved chemicals in its operating manual. According to the manual, the lists are based on EPA's regulations. The firm requires its technical division in the United States to approve, in advance, all pesticides used, including those used in emergency situations, such as an unanticipated outbreak of a pest or disease. The operating instructions specify how each pesticide should be used for each crop, including dosage and preharvest intervals. Officials of another multinational firm, which also uses U.S. pesticide regulatory information, told us that the firm's agronomists, during their twice-weekly monitoring of all growers, specify changes in how pesticides should be used according to the firm's approved list.

## Multinationals' Controls Over Pesticide Use

The multinational firms we contacted had controls over acquisition and use of pesticides applied to their export crops. Their officials told us that the firms also supply pesticides used by their contract growers, arrange sources of purchase, or apply pesticides for them. Further, they said the firms provide access only to pesticides EPA has approved for use on the export crops and according to the written pest control plans they provide to growers. They also employ agronomists to supervise employees' and contract growers' implementation of the approved pest control plans. Additionally, while recordkeeping methods (including use of vouchers, warehouse receipts, diary notes based on direct observation, and grower-signed spraying receipts) used to monitor pesticide access and use varied among the firms, all methods tied the pesticide used to the crop and application date.

## Multinationals' Use of Pesticide Residue Testing

Officials of only one multinational firm told us that it regularly tests its commodities for pesticide residues. However, representatives of some of the others said that their firms obtain pesticide residue testing under certain conditions, such as when they change written pest control plans, to ensure their fresh produce meets U.S. pesticide requirements. Overall, these firms depend on good agricultural practices resulting from their internal controls to ensure that their exports meet U.S. pesticide requirements.

However, the representatives told us that when they obtain residue testing, they use laboratory services outside the exporting country because expeditious service is unavailable within their countries. Therefore, if residue testing is needed, the produce generally is not tested before shipment. For example, the president of one multinational firm in Guatemala told us that the firm cannot get residue testing done in Guatemala in less than 3 weeks. Therefore, when residue testing is necessary, the firm obtains it in the United States after shipment.

### Multinationals' Use of Quality Controls

According to their representatives, most of the multinational firms work toward quality standards set by the company. The representatives said that these standards were dictated by customer preferences and were related primarily to a commodity's size and appearance.

## Other Experienced Export Growers

Other experienced export growers that we spoke with were affiliated with older, national exporter/grower associations and tended to have management practices in place that help them meet U.S. safety and quality requirements. We identified these types of growers in Chile and Mexico, where most export growers belong to such associations. However, grower implementation of these practices varied between the two countries and among the growers in Mexico.

Like multinational firms, more of these growers (than of the less experienced export growers we visited) used management practices that address U.S. safety and quality requirements, primarily because of the economic incentive—52 percent of Chile's and about 90 percent of Mexico's produce exports go to U.S. markets. The exporter/grower associations in Chile and Mexico provide the experienced growers with a variety of services designed to ensure that their members meet their export markets' import requirements. These services include (1) obtaining information on U.S. requirements and (2) providing technical assistance, such as developing pest control plans, assisting with residue testing, and providing quality inspections.

## Most Mexican Export Growers Are Assisted by the Confederation of Growers Associations

In Mexico, the government requires its export growers to be members of either UNPH or another exporter organization registered with the Mexican government. According to its president, most export growers are members of UNPH. UNPH provides its members with many of the resources necessary to meet U.S pesticide requirements. According to Mexican government and UNPH officials, the Mexican government relies on UNPH and its regional associations to ensure that export growers meet U.S. pesticide and quality requirements.

To help meet this goal, UNPH provides its export growers with services ranging from providing information on which pesticides are legal in the United States on Mexico's export crops; to written pest control plans, such as spray schedules; to monitoring of use through residue testing. UNPH's level of assistance, however, is not the same across all export-growing areas. For example, it provides written pest control plans and residue testing to areas that have less access to U.S. information and that have experienced export problems. It also provides residue testing in areas that export the most produce.

Until sometime in 1988, the Mexican government had assigned UNPH the authority and responsibility for issuing export permits for fruits and vegetables. This authority had allowed UNPH to impose quality and pesticide use controls by making adherence to lists of U.S.-approved pesticides for use on export crops a condition for issuing an export permit. UNPH and Mexican government officials told us that, given this authority, UNPH had controlled about 97 percent of Mexican exports through conditions stated in the export permits.

In November 1988, however, UNPH's president reported at UNPH's national convention that government policy had shifted from a system with controls and regulatory mechanisms over planting and exports to a more decentralized system. He also reported that the government was no longer requiring the export permits previously required for all exported crops. In July 1989 UNPH's U.S. manager told us that this policy change had resulted in an increase in "bad produce" being shipped to the United States by small, inexperienced domestic growers, which depressed prices and hurt Mexico's image as a produce exporter.

UNPH also works on the regional level in Mexico to solve export problems. It has established regional associations in 24 of the 32 Mexican states. The 24 regional associations represent 214 local unions with about 20,000 fruit and vegetable export growers.

UNPH reported that the top five Mexican exporting states (in order of exported volume, Sinaloa in western Mexico, Baja California and Sonora in northwestern Mexico, and Michoacan and Tamaulipas in central and northeastern Mexico) were responsible for over 85 percent of Mexico's fruit and vegetable exports in the 1986-87 growing season, and 84 percent in the 1987-88 growing season, with Sinaloa accounting for 48 percent and 45 percent, respectively. In addition, according to their regional association, Sinaloa growers produce about half of all vegetables exported to the United States during the winter vegetable season.

According to UNPH officials, export growers in the western, northwestern, and northeastern states tend to be more sophisticated and well-educated and have large landholdings; export growers in the central state are generally less sophisticated and educated and farm smaller areas of 10 to 20 hectares.

## UNPH Provides Information on U.S. Pesticide Requirements

According to its officials, UNPH gathers information on the most current U.S. pesticide regulations and distributes it to export growers to facilitate exports and decrease rejections of Mexican produce at the U.S. borders. The officials said that UNPH recognizes that many export growers in northwestern Mexico are physically close to the United States and therefore have easier access to direct sources of information on U.S. requirements. Nevertheless, UNPH supplies information on U.S. standards to all Mexican export growers to ensure that they have access to accurate information. According to the officials, UNPH's primary source of information on U.S. pesticide requirements is a Washington, D.C.-based industry representative.

Regional UNPH associations distribute information on U.S. pesticide requirements to local grower unions and individual growers primarily through the wall chart, mentioned in chapter 2, which details all chemical/crop combinations and corresponding U.S. residue tolerances for Mexican export crops. FDA's Los Angeles district pesticide coordinator, who examined the chart, told us that the chart is accurate, with one exception: omethoate, which does not have a U.S. registration or tolerance, was listed as legal on major export crops, such as bell peppers, tomatoes, and cucumbers. FDA detected illegal omethoate residues on some Mexican shipments sampled at the U.S. border in 1988, and many Mexican shipments were refused entry. FDA officials estimated losses to Mexican exporters/growers at over $40 million. Mexican government officials told us that they would seek U.S. tolerances for omethoate and other chemicals specifically required for production in the Mexican environment.

UNPH also distributes information on changes to EPA regulations through monthly newsletters. For example, UNPH's January 7, 1988, newsletter announced that a temporary U.S. tolerance of 7 parts per million for tiodicar (an insecticide) on broccoli became effective in October 1987.

### UNPH Provides Some Written Pest Control Plans

In Mexico's more sophisticated export states, such as Sinaloa, Baja California, and Sonora, growers routinely develop their own spray schedules using the information provided in the wall chart. However, UNPH has developed and distributed standardized spray plans for its members in some of Mexico's less sophisticated export states.

For example, the regional UNPH association distributed a spray schedule for growers in Zamora, Michoacan, who grow strawberries exclusively for export to the United States. The spray schedule was based on information in the wall chart. It detailed the strawberry pest or disease to be treated with each pesticide, the proper mix, and dosage rate. We found that the spray schedule's information agreed with U.S. regulations for strawberries.

## UNPH and Mexican Export Growers' Controls Over Pesticide Use

UNPH officials told us that they do not routinely monitor export growers' selection and use of pesticides in Sinaloa, Baja California, and Sonora—except for random field sampling for residue testing in Sinaloa—because growers in these areas are very experienced and have access to technical assistance needed to meet U.S. requirements. The officials said, however, that in the central export-growing areas, such as Michoacan, where technical assistance is not readily available, the local UNPH associations provide assistance, such as purchasing pesticides that meet U.S. requirements and reselling them to export growers. UNPH officials said that they believe that this assistance provides an economical source of pesticides for smaller export growers and encourages the use of pesticides that are legal in the United States on Mexican exports. UNPH officials acknowledged, however, that these growers still have the option of obtaining pesticides from local suppliers.

Use of pesticide purchase and application records varied among the export growers we talked with. Export growers in Michoacan and Tamaulipas tended to not have purchase and application records. UNPH grower members in Baja California and Sinaloa, however, told us that they track their pesticide application by using logs and diaries to note their choice of pesticides and the fields treated.

## UNPH's Use of Pesticide Residue Testing

UNPH provides preexport residue testing in two of the four exporting states we visited, Michoacan and Sinaloa. According to UNPH officials, this testing is provided because Michoacan growers have experienced pesticide residue problems in the past, and Sinaloa accounts for almost half of Mexico's exported produce to the United States. The officials said that growers in other major exporting states, including Baja California and Tamaulipas, obtain residue testing at their own discretion. During the 1987-88 growing season, UNPH performed about 1,300 preexport residue tests for strawberry growers in Michoacan and about 1,000 for growers in Sinaloa.

In Michoacan, where one of the primary export crops is strawberries, UNPH relies on private laboratories and limits its testing to two pesticides—azodrin and monitor—that it knows growers are likely to use but that are illegal for use on strawberries in the United States. The local association president told us that UNPH expelled 12 growers during 1988 because the laboratories found residues of the 2 chemicals. UNPH denied export permits to these growers for shipments containing violative residues.

UNPH officials told us that in Sinaloa, Mexico's major exporting state, UNPH performs a broader range of testing. These officials said that they try to identify residues of 50 commonly used pesticides using FDA's multiresidue method, which identifies a number of pesticide ingredients in a single procedure. UNPH has a laboratory in Sinaloa dedicated to pesticide residue testing of export crops and staffed by an FDA-trained technician. The laboratory performs field sampling at harvest and provides follow-up testing if growers receive FDA violations.

## UNPH's Efforts to Control Quality of Mexican Export Crops

U.S. importers of Mexican produce contract with USDA's Agricultural Marketing Service to grade UNPH growers' produce at the U.S. entry point, primarily in Nogales, Arizona, according to an AMS official. AMS' district manager in Nogales told us that in recent years UNPH required that about 80 percent of the produce meet U.S. No. 1 grade requirements. According to UNPH's U.S. manager, the exporters, together with their U.S. partners, where they exist, determine what the quality of exported produce should be, largely on the basis of their knowledge of the United States' or other markets' quality requirements and changes in consumer demands.

In December 1988 USDA reported that the Mexican export licensing requirement for fresh fruits and vegetables had been dropped, and in September 1989 UNPH informed AMS' district manager in Nogales that UNPH would not require minimum inspections for the 1989-90 growing season. UNPH was previously authorized by the Mexican government to issue export permits for horticultural products. During the time UNPH had authority to issue export permits, it used the requirements stated in the permits to control its grower members' attention to quality. According to UNPH's president, UNPH tried to compensate for the loss of control over export permits by increasing its physical presence at border crossings with the greatest problems and documenting all export shipments with a new form.

According to AMS estimates, almost half of the fresh fruit and vegetable imports from Mexico from 1985 through 1987 were required to meet minimum quality standards under U.S. marketing order legislation. Most of the inspected produce was tomatoes—averaging over 810 million pounds a year. Other AMS-inspected produce included onions, limes, table grapes, oranges, and grapefruit.

## Chilean Export Growers Are Assisted by Their National Exporters Association

The Chilean exporters association (Asociacion de Exportadores de Chile A.G.) facilitates the export process for Chilean fruit and vegetable exporters/growers and tries to ensure that Chilean growers use management practices that help them meet their export markets' requirements. The association's executive director told us that its members handle about 95 percent of all Chilean fruit and vegetable exports. The association provides information on the import regulations of Chile's export markets, which augments information exporters have obtained independently. The association also provides pest control plans for certain export fruit crops, such as grapes and tree fruit.

According to government officials, Chilean exporters contract with growers for production of export commodities and include provisions for controlling pesticide use in the contracts. The Chilean exporters we spoke with also monitor grower selection and use of pesticides and arrange residue testing when needed.

### Chile's Exporters Association Provides Information on U.S. Requirements

The Chilean exporters association gathers information on current U.S. pesticide requirements and distributes it to exporters and export growers. It also funds research on pesticide use in Chile to determine what constitutes good agricultural practices in Chile's climate.

The association obtains information on U.S. regulations from FDA, EPA, the Chilean government, and the Chilean representative to Codex. At a 1986 association seminar, for example, FDA and EPA officials presented information on U.S. laws governing pesticides, FDA's policies and procedures for regulating pesticide residues in imported foods, EPA's registration and tolerance-setting procedures, and steps that Chilean authorities should take to ensure that Chilean produce exports meet U.S. pesticide requirements. According to the Director of FDA's Contaminants Policy Staff, the Chilean organizations were committed to and had the capability for ensuring that pesticide use on produce destined for U.S. markets would conform with EPA's requirements.

Since 1980 the association has summarized information on U.S. pesticide requirements and annually published and distributed a manual identifying pesticides, residue tolerances, and preharvest intervals allowed on fruit crops exported to the United States. Information on regulations in Chile's other export markets, primarily Europe and Japan, was added in 1984. We found that the pesticide recommendations in the 1987-88 manual agreed with U.S. tolerances. The manual also indicated available pesticides that are not registered in the United States.

Until recently, the association published information needed by fruit exporters only. Association officials told us that the association was planning to expand its programs to serve vegetable growers as well.

To further ensure that Chilean exports meet U.S. requirements, the association funded university research to determine if residues resulting from use according to label instructions are the same in Chile as in the United States. The studies showed that several pesticides left residues for longer periods of time when used in Chile. As a result, the association modified the manual's guidelines for several pesticides, lengthening the preharvest period, to ensure that residues do not exceed U.S. tolerances.

## Chile's Exporters Association Develops Pest Control Plans Based on U.S. Standards

The Chilean exporters association contracts with an expert at the University of Chile to develop pest control plans for each of Chile's major export crops destined for the United States. These plans are available to all exporters and growers free upon request. According to the five exporting firms we contacted, which accounted for about 42 percent of Chile's exports in 1987, the firms had received the information and spray plans from the association and had provided their growers with pest control plans that met U.S. standards for commodities grown for the U.S. market. In their contracts, these exporters require growers to follow these plans. The pest control plans we reviewed identified the pest or disease to be treated with each pesticide for each crop and the dosage rate. The plans also provided alternative treatments that conform to U.S. requirements.

### Chilean Exporters' Controls Over Pesticide Use

Chilean exporting firms told us that they routinely monitor selection and use of pesticides by their contract growers through their agronomists, who regularly supervise up to 15 growers each. Growers are required to follow a firm's spray plan unless a substitution is approved in writing by the agronomist. Records of 16 growers growing for 4 of the 5 firms showed that the firms' agronomists had supervised growers weekly during the early growing season and more frequently during the harvest period to ensure implementation of the spray plans. The other firm, a cooperative, has its agronomists visit its growers about every 2 weeks.

Representatives of Chile's Chemical Producers Association told us that 75 percent of all agricultural pesticides used in Chile are supplied to growers by exporters. Some of the remaining 25 percent are purchased directly with growers' own funds; the rest are charged to an exporting firm's account by its growers. This firm is one of the multinational firms we contacted. Because growers can charge chemicals only on the firm's authorized list, they obtain only approved chemicals from this source.

The 21 Chilean export growers whose records we reviewed also kept records of pesticide purchases and application information. The agronomists told us that they monitor field production, including checking growers' application records, to ensure that only approved pesticides are used.

### Chilean Exporters' Use of Pesticide Residue Testing

The Chilean exporting firms told us that they do not routinely test fruit for residues before export but rely on their other management practices to ensure that U.S. safety and quality requirements are met. They arrange pesticide residue testing if they have problems during the growing season, such as a need for later-than-normal spraying. For example, the largest fruit exporting firm in Chile told us that it sometimes uses three laboratories for intermittent testing, SGS and NutriClean in the United States and Fundacion Chile (a quasi-government institution) in Chile. According to a firm representative, the produce is not shipped if violative residues are found. The other exporting firms told us they similarly arrange residue testing if needed.

### Chilean Exporters' Use of Quality Controls

According to Fundacion Chile officials and representatives of the firms we spoke with, Chilean growers have a variety of quality controls in place. Fundacion Chile officials told us that Fundacion Chile performs quality control inspections on 10 percent to 12 percent of all Chilean export produce and that Fundacion Chile's standards exceed Chile's domestic quality standards. This produce is marked with a quality certification seal. In addition, an APHIS official in Chile told us that Chilean exporters use AMS' voluntary inspection service during periods when U.S. marketing orders are not in effect.

According to AMS estimates, about 19 percent of the fresh fruit and vegetable imports from Chile from 1985 through 1987 were required to meet minimum quality standards under U.S. marketing order legislation. Most of the marketing order-related inspections were for table grapes—averaging about 110 million pounds a year—but also included avocados and onions.

## Less Experienced Export Growers

In Costa Rica, the Dominican Republic, and Guatemala, which have a shorter history of exporting fruits and vegetables to the United States than do Mexico and Chile, most export growers, other than multinational firms growing traditional high-volume export crops, are new to the export business and are affiliated with relatively new national associations.[1] These less experienced growers tend not to have management practices in place that specifically consider U.S. safety and quality requirements for their export crops. They have fewer resources, including fewer sources of information on U.S. pesticide requirements, and the information they obtain may be inconsistent or inaccurate. The less experienced growers that we contacted in these countries had small farms, usually under 100 acres, and grew lower volume nontraditional and specialty export crops, such as Chinese vegetables, cauliflower, strawberries, melons, and chayote—mostly for the United States.

Officials of these countries' grower/exporter associations indicated that they were seeking and developing information on U.S. requirements to provide to their export growers. In these countries, export growers were experiencing significant difficulty in exporting certain crops to the United States because of a lack of information on U.S. pesticide requirements and because, in many cases, the United States has not established tolerances for pesticides used on these crops.

---

[1] For example, Guatemala's national association, GREMIAL, was established in 1982 and Costa Rica's CAAP in 1985.

According to AID documents, much of these countries' increased agricultural efforts grew out of Caribbean Basin Initiative (CBI)[2] projects to expand the countries' economies by increasing exports of nontraditional fruits and vegetables primarily directed at the U.S. market. In these countries, most export growers are therefore new to the export business. CBI workshop projects have focused on developing and marketing the crops for export and, according to a USDA official, little attention has been given to providing information on pesticide inputs. According to this official, however, the workshop participants have consistently asked for specific information about what pesticides can be used on specific export crops destined for the United States. As discussed in chapter 4, new U.S. AID projects are addressing the exporters' need for U.S. pesticide information.

## Role of National Grower/Exporter Associations in Costa Rica, the Dominican Republic, and Guatemala

According to association officials, the national grower/exporter associations represent about 80 percent of the export growers in Guatemala, about 60 percent in the Dominican Republic, and almost all the export growers in Costa Rica. These associations, which were established to help expand and improve their countries' agricultural export industries, perform a variety of services, such as providing marketing and financing of exports for their members. However, they do not provide information on their members' export markets' pesticide requirements or technical assistance in pest management. As previously mentioned, each of these associations was seeking information on U.S. pesticide requirements at the time of our visits.

## New Export Growers in the Three Countries Have Limited Information on U.S. Pesticide Requirements

The export growers, exporters, grower/exporters, and exporter associations we contacted in the three countries said that they had insufficient sources of information on U.S. pesticide requirements. While the Guatemalan and Costa Rican associations had some commercial pesticide publications, only one publication showed U.S. pesticide requirements. None of the associations had official U.S. government sources of information, such as EPA's regulations on pesticide tolerances.

Most export growers we contacted in Guatemala and Costa Rica said that they had received some information from U.S. contacts or commercial publications; however, none of the growers said that they had access to official U.S. regulatory sources of information. In the Dominican Republic, the growers told us that they did not have information on U.S. requirements. At the time of our visits, the association in each country was exploring how export growers and exporters can access critically needed information on U.S. pesticide requirements.

---

[2] The 1983 Caribbean Basin Economic Recovery Act (P.L. 98-67, 97 Stat. 384) provided new trade and tax measures to promote economic revitalization and expanded private sector opportunities in the Caribbean Basin region. Areas covered in this initiative include the Caribbean island nations and Central America.

## New Export Growers Lack Written Pest Control Plans That Consider U.S. Requirements

Except for one grower, none of the growers, exporters, grower/exporters, or exporter associations we contacted in the three countries had developed written pest control plans that reflect U.S. pesticide requirements. They said that they lacked information on such requirements. However, over half the growers, exporters, and grower/exporters told us that they used the practice of preplanning what pesticides would be used on their export crops. Of the 12 growers, exporters, and grower/exporters we contacted in these countries, 5 had developed plans and 7 had developed lists to guide the selection and use of pesticides. However, only 1 of the 12, an exporter, had a plan consistent with U.S. pesticide requirements. Others' plans or lists included one or more pesticides that are not approved for use on the specific crop being grown for export to the United States.

The exporter associations also had not developed pest control plans to improve the use of pesticides by growers of nontraditional export crops. Nonetheless, officials of the Dominican Republic and Guatemalan associations told us that they would provide such assistance to their members if they could obtain official information on U.S. rules.

## New Export Growers' Controls Over Pesticide Use

Of the 12 growers, exporters, and grower/exporters we contacted in the 3 countries, 8 told us that they monitored pesticide application to some extent; however, as with the pest control plans discussed above, they said that U.S. pesticide requirements did not form the basis of such monitoring. About half the growers we talked with maintained pesticide application records, including charts, diaries, and agronomists' recommendation records; and about two-thirds of the growers, exporters, and grower/exporters told us that they were periodically advised by an agronomist.

## New Export Growers' Use of Pesticide Residue Testing

The 12 growers and exporters we contacted in the 3 countries told us that they generally had not obtained residue testing before exporting their crops, primarily because of a lack of timely access to adequately equipped laboratories.

In the Dominican Republic, government officials told us that neither government nor private testing laboratories were available for export growers' use. They said that because of a lack of supplies and equipment, their government's laboratory had been inoperative since September 1986.

In Costa Rica and Guatemala, limited laboratory services were available to produce exporters from government or government-sponsored laboratories for residue testing on a fee-for-service basis. However, our discussions with some laboratory personnel in these countries indicated that a small number of tests had been conducted for produce exporters. Officials of the National Pesticide Commission in Costa Rica told us that the Commission was exploring ways to provide residue testing services for exporters and others.

## Observations

Multinational firms in the five countries and experienced exporters in Mexico and Chile had the most management practices in place that take into account U.S. pesticide requirements. Most importantly, these firms and exporters had significantly more information available on U.S. pesticide requirements and had mechanisms in place to ensure that such information was updated.

The export growers in Costa Rica, the Dominican Republic, and Guatemala, except for the multinational firms, are less experienced in exporting fruits and vegetables to the United States. While these countries' export volumes are expected to increase, they had minimal practices in place to ensure that U.S. pesticide requirements are met. These exporters had some management practices in place to monitor pesticide use to some degree. However, the practices offered little assurance that their export crops would meet U.S requirements because, in almost all situations, these export growers and exporters lacked information about pesticides allowed on those fruits and vegetables in the United States.

Because increased exports of fruits and vegetables are planned in these countries, and as FDA implements provisions of the Pesticide Monitoring Improvements Act of 1988, a failure to meet U.S. pesticide requirements may jeopardize the economic growth of these countries and the success of U.S. projects planned to increase nontraditional agricultural exports in these countries. At the time of our visits, export growers, exporters, and exporter associations in these countries were seeking information on U.S. requirements. In addition, U.S. agencies were expanding different types of assistance, which should prove timely to these efforts. (See ch. 4.)

To the extent that export growers and exporters use the pesticide management practices mentioned in this chapter—particularly obtaining and following information on pesticides allowed on export crops to the United States—the United States will be less likely to experience illegal pesticide residues on fruits and vegetables presented for import from these five countries. Further, consumers will have better assurance that only pesticides with approved U.S. tolerances have been used in producing imported produce.

Chapter 4

# U.S. Agencies' Efforts to Assist Foreign Countries in Meeting U.S. Safety Requirements

Several U.S. agencies have provided or are providing pesticide-related training or technical assistance to developing countries, which could influence their abilities to meet U.S. safety requirements on produce exported to the United States. This chapter discusses the efforts of EPA, FDA, USDA, and AID. We did not verify these efforts or evaluate their effectiveness.

## Environmental Protection Agency

EPA offers assistance to developing countries through its Offices of International Activities and Pesticide Programs, conducting workshops, consultations, and ad hoc training seminars. One objective of these activities is to improve the developing countries' management of pesticides. These activities indirectly contribute to protecting the health and welfare of U.S. citizens when food is imported from these countries.

EPA's primary effort to assist developing countries with pesticide controls has been to implement regional workshops developed in collaboration with AID, FDA, and such international and regional organizations as FAO and WHO. The workshops are designed to upgrade the technical skills of regulatory and enforcement officials and scientists in developing countries and to facilitate information exchange about key regulatory issues among countries in the region and between these countries' regulatory agencies, EPA, and other governments and international organizations. According to the Director of EPA's Developing Countries Staff, one workshop component has also focused on the need for developing a residue testing system for exports to ensure that exported foods do not contain pesticide residues that could prevent acceptance by the importing country. In addition, he said that workshop officials have provided sources of information about pesticide use and U.S. government contacts for additional information.

One workshop was held for the Asia and Pacific region during 1988, with two follow-up workshops during 1989. A workshop for the Latin American region was held in January/February 1990.

EPA has also offered ad hoc training seminars, consultations, and training on pesticide residue testing to countries on request and has been involved in ongoing programs to help improve countries' data bases of pesticide information through the United Nations Environmental Program (UNEP) and FAO. In addition, it has worked with international organizations in regional and global efforts to improve pesticide use.

EPA's records indicate that of the 39 foreign visits to EPA during 1987 and 1988 from the 5 countries we contacted, 3 were related to pesticide issues. The chief of EPA's analytical chemistry laboratory told us that no one from the five countries had participated in EPA's residue analysis training over the past several years.

According to an Office of International Activities' document, since late 1986, EPA has divided its approach in assisting developing countries to develop or improve their pesticide controls. For the poorer nations, EPA's approach has been to emphasize collaboration with, and support for, existing development assistance agencies, particularly within the framework of U.S. development assistance policy through AID. EPA's technical service memorandum of understanding with AID, dated February 1988, identifies a variety of assistance related to environmental issues that EPA is to provide AID. In addition, EPA is pursuing closer ties with bilateral donor agencies, the multilateral development banks (the World Bank and regional development banks), and the United Nations Development Program.

For rapidly industrializing developing nations, EPA's approach has been to provide more direct assistance, including consulting, training, and information-sharing, via formal agreements and informal arrangements between EPA and its foreign counterpart institutions. For example, part of a cooperative agreement with Mexico specifies that each country's laws and regulations will be enforced, to the extent possible, regarding transboundary shipments of hazardous wastes and substances, including pesticides. It also provides for notifying each other about regulatory actions to ban or severely restrict pesticides.

Under FIFRA's sections 17(a) and 17(b), EPA is to notify foreign governments when U.S. pesticide manufacturers export chemicals to their countries that are not registered for use in the United States and when EPA cancels or suspends a pesticide's use(s). When governments are alerted to unreasonable hazards associated with using particular pesticides, they can act to lessen exposure of their workers and citizens. The United States can benefit when a foreign government restricts using these harmful or potentially harmful pesticides on crops that are subsequently imported into the United States.

However, as discussed in chapter 2, we reported in April 1989 that EPA was not effectively monitoring compliance with FIFRA's export notification requirements, and we recommended several actions to improve the effectiveness of EPA's program. At the same time, we reported that foreign governments rely on the United States for information on pesticides (1) that the United States has judged to be hazardous to human health or to the environment or (2) for which no hazard assessment has been made. We concluded that improvements in U.S. notification requirements could protect U.S. imported products when foreign governments receive full information on hazardous unregistered pesticides previously used on foods produced in their countries and intended for U.S. markets.

## Food and Drug Administration

According to the Director of FDA's International Affairs Staff, FDA does not have a formal outreach program to assist foreign countries in meeting U.S. pesticide requirements. However, through the International Affairs Staff and often in cooperation and coordination with other agencies and organizations, FDA has provided technical training and consultation activities (including training programs funded through FAO, WHO, PAHO, or the training recipient's home country) to its foreign government counterparts on request. In addition, FDA has provided direct input to countries—through contact with the countries' embassies—on FDA detention of food from these countries. According to FDA's Americas' Desk Officer, such contacts have been made to identify and resolve problems causing detention and to reduce the countries' pesticide violations.

In a February 1988 report to the House Appropriations Committee, FDA stated that it uses the training activities and other contacts to stress the need for compliance with existing U.S. requirements and to encourage the countries to improve their pesticide regulatory controls. FDA also described cooperative activities to resolve pesticide residue problems. These activities ranged from agreements to investigate the source of a residue problem to, less frequently, the establishment of a formal memorandum of understanding between the appropriate foreign government entity and FDA.

Examples of FDA assistance activities follow:

- The International Affairs Staff, under the International Visitors Program, coordinates the scheduling of meetings with other agencies throughout the United States and the implementation of training. During fiscal year 1989, it coordinated such activities for over 600 foreign visitors from over 50 countries, including Mexico and Chile.

- FDA pesticide specialists have traveled to several countries, including Mexico and Chile, often under U.N. sponsorship, to train foreign pesticide analysts in analytical methods and to train administrative staff on the regulatory aspects of FDA's pesticide program.
- An FDA laboratory analyst has provided Costa Rica's Ministry of Health with assistance in (1) setting up government laboratories for assuring food safety and (2) getting government and industry to work together on food safety issues. This project is the result of the August 1985 Inter-American Conference on Food Protection, discussed in chapter 1, at which PAHO and FDA agreed to work together to implement projects that assist Latin American governments in upgrading their food protection systems.
- In 1986, at Chilean request, FDA presented information at Chilean seminars about U.S. pesticide laws and FDA policies and procedures regarding pesticides on imported food and the steps Chilean authorities should take to ensure that Chilean produce exports meet U.S. pesticide requirements.
- Mexico has requested more FDA laboratory training to assist it in applying 10 new regional laboratories to food safety testing, according to the Director, International Affairs Staff. FDA plans to provide the training at U.S. laboratories.
- In 1988 FDA offered to provide the Dominican Republic with whatever assistance was necessary to resolve extensive residue violations on imported produce. In early 1989, FDA officials met with officials of the Dominican Republic's government and export industry to discuss food products on countrywide automatic detention from the Dominican Republic because of pesticide residues. They also met to discuss initiatives the Dominican Republic's government was planning to remedy the situation.
- In 1989, according to the Director, International Affairs Staff, FDA assisted AID's regional office for Central America and Panama in assessing the extent of Guatemala's and Costa Rica's capabilities to perform laboratory testing on produce exports and identifying actions needed to improve such capabilities.

According to FDA's February 1988 report to the House Appropriations Committee, FDA has often been called on to provide input, guidance, and technical assistance to foreign government counterparts, foreign private sector organizations, and U.N. and other international organizations. FDA's interaction with FAO, WHO, the Codex Alimentarius Commission, and UNEP has ranged from document review to an active leadership role in developing analytical guidelines or regulatory principles. For example, in its leadership role in a joint WHO/FAO/UNEP Global Monitoring System, FDA helped prepare a document that provides guidance, particularly for developing countries, on establishing monitoring programs to estimate the dietary intake of selected pesticides and chemical contaminants. In addition, FDA officials told us that FDA has worked with WHO to help set up an international program for chemical safety that serves as an information source for member governments.

Like EPA, FDA has cooperative agreements with Mexico. Cooperative agreements executed in 1988 with the Mexican Ministries of Health and Agriculture emphasize the exchange of information on pesticide regulations and detention and collaboration on mutual training projects. One agreement calls for (1) mutually developing programs of technical cooperation to strengthen Mexican food regulation and (2) discussing the harmonization of specifications for chemicals used in or on food.

## U.S. Department of Agriculture

The Private Sector Relations Division of USDA's Office of International Cooperation and Development (OICD), as part of its implementation of CBI programs, assists countries in understanding U.S. import requirements. Agricultural programs under the CBI initiative are designed to promote economic development, two-way trade, and investment in the Caribbean Basin and Central America, and therefore emphasize marketing.

The division's principal means of outreach to CBI countries has been the workshops and seminars it has held in the region annually since 1983, which provide information on U.S. standards and regulations and basic marketing information needed by both U.S. and Caribbean Basin entrepreneurs. The Division has also developed the Agricultural Marketing Handbook for Caribbean Basin Products. The handbook provides information on most of the key U.S. regulatory agencies' activities and each agency's role over safety and quality of imported food. According to an OICD official, the Division's activities and personnel are funded primarily through AID; however, USDA funds an information center and provides the professional expertise.

## Agency for International Development

AID tries to assist growers on pesticide use related to agricultural exports in a variety of ways. Through its Regional Office for Central America/Panama (ROCAP), it recently began to directly assist developing Central American countries in meeting U.S. pesticide requirements by disseminating regulatory information about pesticides legal in the United States on nontraditional export crops from Central America. AID is also assessing the feasibility of using the Inter-Regional Research Project Number 4 (IR-4) Program,[1] which supports the development of pesticide tolerances for minor crops in the United States, to establish pesticide tolerances for Central American export crops that do not have U.S. pesticide tolerances.

In addition, by carrying out environmental assessments, before approval, of AID-assisted projects involving pesticides, AID has the opportunity to affect the safety of exported produce resulting from its agricultural export projects. These assessments, which are required by AID's environmental regulations, are to include, among other things, consideration of the EPA status of the proposed pesticides.[2]

## Nontraditional Agricultural Export Support Project and Subproject

ROCAP has provided assistance to export growers and exporters in meeting U.S. pesticide requirements through extension of a regional project, Nontraditional Agricultural Export Support, which started in fiscal year 1986. The project's primary goal is to facilitate economic growth by expanding nontraditional agricultural exports, including fruits and vegetables, for Central America and Panama. The project provides assistance to export growers through key private sector exporter associations in several countries, including GREMIAL in Guatemala and CAAP in Costa Rica. Technical assistance and training is to be provided through these associations to the associations' members; local growers' associations; cooperatives; export brokers and sellers; and, to some extent, public sector export personnel. As discussed in chapter 3, exporter associations in some countries have played key roles in increasing export growers' abilities to meet U.S. pesticide requirements on exported crops, and the associations in the countries we visited were seeking information on U.S. pesticide requirements for their members.

In 1988 ROCAP began a subproject of the Nontraditional Agricultural Export Support project, under which it plans to (1) distribute regulatory information on U.S. import requirements to private and public sectors in Central America and (2) provide training to the nontraditional agricultural exporter associations on how to interpret basic references on U.S. regulatory information. This subproject responds to an urgent need of export growers in Guatemala, Costa Rica, and other Central American countries that have not had ready access to information on U.S. pesticide requirements for their export crops and risk rejection at U.S. entry points because of the information void. (See ch. 3.)

---

[1] 1The IR-4 Program is a nationwide cooperative effort among USDA's Cooperative State Research Service and Agricultural Research Service; EPA; state agricultural experiment stations; and individual researchers, manufacturers, and growers. The national headquarters, at Rutgers University, New Brunswick, New Jersey, primarily assists in developing research protocols and, in cooperation with EPA and the manufacturer of the pesticide involved, in assembling petitions for pesticide registration.

[2] The conference report (H. Rept. 101-344) on the Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1990 (P.L. 101-167, Nov. 21, 1989) requires AID to study and report by April 1, 1990, on the feasibility and potential benefits of joint research and education, including chemical, biological, and biotechnology research, on agricultural production in the Caribbean region (including the CBI nations and the U.S. states abutting the Gulf of Mexico).

The subproject offers a direct opportunity for AID to assist export growers in determining which pesticides they will use and to ensure that they are applied correctly. According to a ROCAP document, ROCAP's long-term goal for the subproject is to have the exporter associations and public sector organizations, through the project training, be able to interpret the basic EPA references on pesticide regulations and begin to provide similar information and updates to export growers. In addition, ROCAP intends to build comparable reference files for Canadian and Codex (international) regulations regarding acceptable pesticide use and tolerances.

ROCAP accelerated the subproject's development as a result of our review, which revealed that exporters and export growers, many of whom were growing export crops under AID-assisted projects, lacked critical information about pesticides legal for use on produce destined for the United States. ROCAP's interest in accelerating the subproject also increased because of anticipated increases in FDA monitoring resulting from enactment of the Pesticide Monitoring Improvements Act of 1988. ROCAP documents stated concern that the potential for violative levels of pesticide residues may jeopardize the success of nontraditional crop exports—a cornerstone of AID's developmental strategy in Central America—and result in significant economic losses for Central American exporters and export growers.

## Information

ROCAP intends to purchase, for the nontraditional agricultural exporter associations to give to growers and for governments, if appropriate, official U.S. government and commercial documents that provide information on pesticides with U.S. tolerances that can be used on nontraditional crops exported to the United States. ROCAP also intends to develop a pesticide label library for EPA-registered pesticides that are commonly used in Central America and maintains a complete file of USDA grade standards for all fresh produce products and some frozen products.

ROCAP has begun to prepare information bulletins, in Spanish and English, summarizing information from official U.S. government sources and trade publications on EPA-approved pesticides for use in growing and processing nontraditional export crops grown in Central America. The bulletins that have been prepared emphasize that all products registered with EPA are required by U.S. law to carry the label instructions; and they stress the need for "strict compliance" with EPA, FDA, and USDA regulations and for purchasing a pesticide product for use on a crop destined for export to the United States only if it has EPA-registered label instructions. One bulletin, dated November 2, 1988, and entitled "Pesticides Approved by the EPA for Use in Growing and Processing Pea Pods (Succulent Green Peas) Sno Peas, Snowpeas, Sugar-Snap Peas," includes the following information:[3]

- A list of the pesticides EPA has registered for use with pea pods in the United States, with the names and numbers under which the pesticides are registered and the trade names under which they are sold.
- EPA residue tolerance levels for products approved by EPA for use with pea pods, expressed in parts per million.
- A list of pesticides most commonly available in Central America for use on pea pods.

According to the ROCAP project manager, ROCAP had completed 10 of the planned 23 bulletins as of May 1989. He estimated that the 10 bulletins provide information on 80 to 90 percent of the nontraditional export crops destined for U.S. markets, including melons, asparagus, snow peas, raspberries, strawberries, okra, limes, squashes, and broccoli. An FDA report showed that it had invoked automatic detentions on several of these crops in 1988 for the countries we visited.

In addition to developing the information on EPA-approved pesticides, ROCAP intends to provide information on changes in U.S. regulations and/or inspection and administrative procedures. It also plans to provide Spanish translations of the legal portions of the USDA quality standards for fresh produce exported from Central America and Animal and Plant Health Inspection Service lists of admissible fruits and vegetables.

### Training

ROCAP planned to provide training in pesticide use management, beginning in September 1989. AID environmental regulations (22 C.F.R. part 216) restrict the use of AID funds for procuring pesticides—specifically those EPA designates as "restricted use"[4] pesticides on the basis of user hazards—until (1) users are made aware of the risks involved with these products and (2) technical assistance is provided, if necessary, to mitigate these risks.

---

[3] We did not verify the accuracy of the information ROCAP is developing in this project; however, according to the ROCAP project manager, AID coordinated with EPA in developing the information.

ROCAP plans to base the formal training course, which would be provided by a private organization, on training programs used in the United States. This training would be given to private and public extension agents, agricultural chemical company representatives and salesmen, and pesticide manufacturer representatives who not only sell the products but also make technical recommendations on pesticide use. Ultimately, ROCAP intends to have the national governments certify the curriculum and examinations and issue licenses to recommend or sell pesticides.

The training element will cover general aspects of pesticide use; pesticide laws; pest biology and identification; pesticide classification and formulations; label comprehension; personal safety; pesticides and the environment; and issues related to specific aspects of pesticide use in Central America, including integrated pest management and pesticide cost calculations. ROCAP's plan is to train persons to train 300 to 400 others within their respective countries, with the training function ultimately becoming a function of the universities.

## Assisting Developing Countries in Obtaining Pesticide Tolerances

In 1988 the Consortium for International Crop Protection (CICP)[5] reported on a study it had prepared for AID on the feasibility of establishing a program to obtain U.S. tolerances for pesticides used on nontraditional export crops from Central America. As discussed in chapter 2, the lack of such tolerances affects some Central American and Caribbean exporters' ability to export produce to the United States, and no-tolerance violations at U.S. entry points can result in severe economic loss to exporters and growers.

---

[4] An EPA classification, determined during the registration process, that a pesticide, when applied in accordance with its directions for use, warnings, and cautions, or in accordance with a widespread and commonly recognized practice, and for uses for which it is registered, generally results in unreasonable adverse effects on the environment, including injury to the applicator.

[5] CICP is a nonprofit organization formed in 1978 by a group of U.S. universities and USDA for the principal purpose of assisting developing nations in reducing food crop losses caused by pests while also safeguarding the environment. CICP's basic goal is to advance economically efficient and environmentally sound crop protection practices in developing countries.

In its December 12, 1988, report, CICP said that an effort could be made to use the IR-4 Program, AID, or ROCAP as a petitioner for obtaining tolerances for pesticides used on nontraditional export crops that EPA has already approved for use on other commodities. Usually, the pesticide manufacturer is the petitioner. The IR-4 Program's principal function is to obtain tolerances for minor crops in which the manufacturer is not interested because the research and development costs are greater than the possible return to the manufacturer. However, according to an AID official, the IR-4 process is slow moving, has limited funding and staffing, and depends on release of information from the chemical companies.

The Consortium identified three pesticide/crop combinations that it said had the most urgent need to be considered under this proposal. They were methamidophos/snow peas, chlorothalonil/strawberries, and thiabendazole/chayote. As of the time we prepared this report, AID had not determined whether to implement CICP's proposal.

## Assessment of Pesticide Use in Projects

According to AID regulations, proposed AID projects involving procurement and use of pesticides must generally receive an Initial Environmental Examination and, in some cases, an Environmental Assessment. Among the several matters to be assessed for each proposed pesticide are (1) its EPA registration status; (2) the requesting country's ability to regulate or control the pesticide's distribution, storage, use, and disposal; and (3) provisions made for monitoring the pesticide's use and effectiveness. Additional justification is required when the proposed pesticide has an EPA restricted use provision based on user hazard. In addition, if the project includes a pesticide against which EPA has initiated a regulatory action, the regulations require AID to discuss the technical and scientific details with the requesting government.

In implementing its regulations, AID can assist export growers in meeting U.S. requirements and affect the safety and quality of exported produce resulting from its projects. However, we noted or were told of several problems concerning the regulations. For example, not all AID-assisted projects are subject to AID's environmental regulations, and AID officials and a 1988 report by the Committee on Health and Environment[a] identified several problems affecting the regulations' implementation. Further, while the regulations require consideration of a pesticide's EPA status, they do not prohibit the use of pesticides that do not have an EPA tolerance established for use on the particular export crop in the United States.

Because our review was not directed at evaluating the effectiveness of the federal agencies' assistance efforts, we did not pursue these matters to the degree needed to fully establish their effect or to determine what steps AID has taken or is planning to improve implementation of its environmental regulations.

## Observations

EPA, FDA, USDA, and AID have carried out a variety of activities to assist foreign countries in increasing their pesticide management capabilities. In particular, AID is currently providing Latin American and Caribbean export growers with information on what pesticides have U.S. tolerances for specific export crops, and EPA is providing guidance in developing pesticide monitoring for their exports. These efforts should prove useful in (1) decreasing the likelihood that U.S. consumers receive produce grown with pesticides lacking EPA tolerances for use on specific crops, (2) helping these countries avoid no-tolerance pesticide violations, and (3) preventing economic losses to exporters and U.S. importers.

---

[a] The Committee was formed by AID, with the Conservation Foundation, pursuant to section 539(i) of the Foreign Assistance and Related Programs Appropriations Act of 1987 (100 Stat. 3341-236). The Conservation Foundation is a nongovernmental environmental group that performs policy analyses of environmental issues. The Committee's report, Opportunities to Assist Developing Countries in the Proper Use of Agricultural and Industrial Chemicals, was issued Feb. 18, 1988.

Chapter 5

# Issues for Consideration by the Congress

As world trade has expanded, concerns have emerged about the safety and quality of imported food, and more attention has been given to recognizing and dealing with the different and complex food safety and quality standards among nations—particularly for pesticide residues on food. U.S. government and consumer concerns often focus on the increasing imports of produce from developing countries because the level of development of those countries' controls over food production has not always been perceived as providing sufficient assurance that exported produce will meet U.S. requirements and because U.S. import monitoring systems cannot provide a perfect safety/quality screen.

Much of the difficulty the five countries we visited had in considering U.S. pesticide requirements related to the absence of U.S. pesticide tolerances for certain export crops and incomplete information about what pesticides are acceptable for use on produce destined for the United States. The extent to which, and in what ways, U.S. agencies should increase their involvement in dealing with these matters are issues with implications for food safety, U.S. competitiveness, and U.S. agencies' responsibilities and resources.

## Lack of Established Tolerances

Latin American and Caribbean countries' ability to meet U.S. pesticide requirements is exacerbated because the United States has few or no tolerances established for pesticides used on some crops grown in these countries—in some cases, because these crops are not grown commercially in significant quantities in the United States, and EPA may not have been petitioned to make a hazard assessment. When export growers are not aware of a specific country's requirements, they may use a pesticide that is not approved for use on a certain crop in the importing country, even though it may be allowed for use on another crop or on the same crop in their own country or another country. As discussed in chapter 2, produce destined for U.S. markets may consequently contain residues of pesticides that do not have EPA tolerances and be rejected at U.S. entry points, with economic loss to the exporting country, its growers, and the U.S. import industry.

To try to deal with this issue, AID is assessing the feasibility of using the IR-4 Program, which supports the development of pesticide tolerances for minor crops in the United States, to establish pesticide tolerances for Central American export crops that do not yet have U.S. pesticide tolerances. However, as discussed in chapter 4, an AID official told us that the IR-4 process is slow moving, has limited funding and staffing, and depends on release of information from the chemical companies.

Another effort to try to deal with this issue is the ongoing discussion among EPA, FDA, and USDA on whether to increase acceptance of Codex maximum residue limits (tolerances) on imported foods. At the time this report was prepared, EPA was considering a proposal that it recommend that, except in cases involving safety concerns, FDA and USDA accept Codex maximum residue limits for imported foods for which the United States does not have a tolerance. According to EPA, in its activities related to imported food, it seeks to ensure that food coming from other countries does not pose risks to the U.S. consumer while, at the same time, it also seeks to ensure that foreign agricultural growers and exporters do not have an unfair advantage over U.S. farmers.

The U.N. organizations—FAO, WHO, and Codex—have developed a multitude of international guidelines, including the Codex international pesticide residue standards, which many developing countries, in particular, depend on when developing their pesticide use and monitoring systems. The United States has been active in developing the Codex international guidelines and standards and, during the current Uruguay Round of the General Agreement on Tariffs and Trade, it has endorsed global harmonization of pesticide residue standards, through adopting international standards and codes of practice, as a way to eliminate nontariff trade barriers and facilitate world trade. However, where countries, such as the United States, have sophisticated food safety and quality systems in place, full adoption of the Codex international pesticide residue standards is complicated by the need to reconcile the international maximum residue limits with the countries' existing tolerances.

Deciding on the extent to which, and in what ways, U.S. agencies should increase their involvement in establishing tolerances for crops not grown commercially in significant quantities in the United States involves consideration of several matters. These matters include the degree to which establishing such tolerances will affect the safety of imported food; the effect on U.S. competitiveness, including the potential for increasing foreign growers' and exporters' ability to compete with the U.S. agricultural sector; the extent of the U.S. agencies' responsibility for taking the actions necessary to establish such tolerances; who should provide the financial and other resources necessary to develop the toxicological and other scientific data needed for establishing such tolerances; and whether the use of the IR-4 Program and the broader acceptance of Codex tolerances are appropriate ways of getting tolerances established for additional import crops.

## Information

As agricultural exports expand and become more important to an individual country's economy, attention to the country's export markets' pesticide requirements heightens and systems evolve to obtain needed information for successful exports. We saw evidence of this evolutionary process in Chile and Mexico, which have been exporting produce to the United States for some time and which had established networks to obtain necessary information and technical assistance. This progress had occurred through cooperative efforts of these countries' governments and private sector exporter associations.

In the other countries, whose growers were less experienced in exporting fruits and vegetables, officials acknowledged the need to obtain more information. However, the necessary information networks had not been established.

While several U.S. agencies have provided pesticide-related training or technical assistance to foreign countries and have responded to requests for information, few agency resources have been devoted to providing information on specific pesticide/crop combinations allowed on imported food. Recently, however, greater communication with developing Central American countries about specific U.S. pesticide requirements by crop has occurred through AID's regional agricultural export support projects.

The extent to which, and in what ways, U.S. agencies should increase their involvement in providing information to U.S. trading partners is an issue that, like the establishment of additional tolerances, involves questions of increased food safety, U.S. agencies' authority and responsibility, U.S. competitiveness, and funding sources. For example, to what extent would providing information to foreign entities enhance the safety of imported foodstuffs? What degree of authority and responsibility do U.S. agencies have for providing information to foreign entities? To which foreign countries and entities should information be provided? Would increasing the flow of information enhance foreign growers' and exporters' ability to compete with the U.S. agricultural sector? And who should provide the financial and other resources needed to gather and disseminate the information?

## The Challenge

Greater global standardization of pesticide tolerances among countries through greater acceptance of international standards could ultimately improve developing countries' abilities to export and could facilitate world trade. However, because adoption of international food safety and quality standards is a slow, deliberative process, information exchange among countries, regarding specific pesticide/crop combinations, will need to continue to expand and improve to ensure that world trade is facilitated and that consumers are assured that food imports meet their countries' pesticide safety requirements.

The extent to which, and in what ways, U.S. agencies should increase their involvement in establishing import tolerances for additional crops and in increasing the flow of information on U.S. food safety and quality standards are issues that will confront the Congress as it deliberates on both food safety and U.S. competitiveness. Establishing tolerances for additional crops and increasing the flow of information could help increase U.S. consumers' assurance about the safety and quality of imported foods; help provide U.S. consumers with a larger variety of foods during a greater part of the year; and help developing countries, many of which are debtor nations, increase their exports to the United States. These actions could also, however, increase foreign growers' and exporters' ability to compete more directly with U.S. producers and processors and increase U.S. agencies' resource needs.

Page 69

Appendix I

# Pesticide Use Per Hectare, by Area or Nation

| Area/nation | Pesticide use (grams per hectare)[a] | Rank |
|---|---:|---:|
| Japan | 10,790 | 1 |
| Europe | 1,870 | 2 |
| United States | 1,490 | 3 |
| Latin America | 220 | 4 |
| Oceania[b] | 198 | 5 |
| Africa | 127 | 6 |

[a] One gram equals about .035 ounce

[b] Includes Australia, New Zealand, and various Pacific Ocean islands

Source: Bengt V. Hofsten and George Ekstrom, editors, Control of Pesticide Applications and Residues in Food: A Guide and Directory—1986 (Uppsala, Sweden: Swedish Science Press)

Appendix II

# U.S. Produce Imports by Region, 1988

| Region/country | Volume (metric tons) |  | Percent of total imports |  |
|---|---|---|---|---|
|  | Country | Region | Country | Region |
| Latin America and Caribbean |  | 5,541,708 |  | 77 |
| Mexico[a] | 1,795,540 |  | 25 |  |
| Ecuador | 797,595 |  | 11 |  |
| Costa Rica[a] | 676,269 |  | 9 |  |
| Honduras | 669,682 |  | 9 |  |
| Colombia | 514,953 |  | 7 |  |
| Chile[a] | 421,709 |  | 6 |  |
| Guatemala[a] | 261,789 |  | 4 |  |
| Panama | 185,752 |  | 3 |  |
| Dominican Republic[a] | 89,914 |  | 1 |  |
| Brazil | 42,246 |  | 1 |  |
| Argentina | 25,759 |  | [b] |  |
| Bahamas | 13,546 |  | [b] |  |
| Venezuela | 11,741 |  | [b] |  |
| Jamaica | 11,459 |  | [b] |  |
| El Salvador | 10,193 |  | [b] |  |
| Other | 13,561 |  | [b] |  |
| Asia/Middle East |  | 618,725 |  | 9 |
| North America (primarily Canada) |  | 556,954 |  | 8 |
| Western Europe |  | 387,256 |  | 5 |
| Oceania |  | 56,177 |  | 1 |
| Eastern Europe |  | 28,022 |  | [b] |
| Africa |  | 4,571 |  | [b] |
| Union of Soviet Socialist Republics |  | 203 |  | [b] |
| **Total** |  | **7,193,616** |  | **100** |

Note: Data include fruits, vegetables, bananas, and plantains

[a] Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico accounted for 3,245,221 metric tons, or 59 percent of U.S. produce imports from the Latin American and Caribbean countries in 1988

[b] Less than 1 percent

Source: Foreign Agricultural Trade of the United States, Calendar Year 1988 Supplement, Economic Research Service, USDA

# Federal Agencies Involved in the U.S. Safety and Quality Network for Imported Produce

The U.S. safety and quality network for imported produce involves several federal agencies. The primary ones are EPA, FDA, and USDA. These agencies' safety and quality activities, primarily as they relate to imported produce, are discussed below.

## Environmental Protection Agency

EPA is authorized to register pesticides and establish pesticide residue tolerances that all fresh produce and other foods and feeds must meet to be considered safe for the U.S. market.

### EPA Establishes Residue Standards

Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended (7 U.S.C. 136 et seq.), EPA is authorized to register and reregister pesticide products, specify the terms and conditions of use, and remove unreasonably hazardous pesticides from the marketplace.[1] In addition, the Federal Food, Drug, and Cosmetic Act (FFDCA), as amended (21 U.S.C. 301 et seq.), authorizes EPA to establish (1) tolerances under section 408(d) for pesticides undergoing registration under FIFRA and (2) import tolerances under section 408(e) for pesticides where there is no registration request under FIFRA and the commodity is being treated outside the United States. EPA can also grant exemptions to use unregistered pesticides when it determines a tolerance is not necessary to protect the public health.

If a pesticide is to be used on food or feed commodities or if its use will lead to residues on these products, FFDCA requires EPA to establish the legal maximum acceptable level of each pesticide residue—tolerance level—allowed on each specific food and animal feed, or a tolerance exemption, for both domestic and imported foods. These tolerance levels are set on the basis of data submitted by the petitioner (usually a chemical manufacturer) who is requesting the residue tolerance. The tolerance data include information on the pesticide's toxicity (potential to cause adverse health effects) and residues (amount which may remain in or on food). Tolerances cannot be legally exceeded and no residue of a pesticide is permitted in or on foods for which an EPA tolerance or exemption has not been established.

---

[1] Under the 1972 FIFRA amendments, the Congress mandated that EPA assess the safety of all pesticides that had been previously registered by federal and state governments. We reported in 1986 (GAO/RCED-87-7, Oct. 27, 1986) that EPA had not yet completed a final reassessment on any pesticide active ingredient. Through the 1988 FIFRA amendments, the Congress gave EPA additional funding for conducting these assessments for the approximately 45,000 products that have not been assessed at current standards, and about 9 years for completing the task.

The registration data, which are required for each pesticide use when applying for domestic pesticide registration, include product chemistry, residue chemistry, environmental fate, and toxicology data. According to EPA officials, a pesticide registration for use on a food crop must be accompanied by the establishment of a tolerance or an exemption from the requirement of a tolerance. Most of the data used in making a tolerance decision are also considered in deciding whether to register a pesticide product.

FIFRA also includes export notification provisions for pesticides intended solely for export. Section 17(a) requires that before an unregistered pesticide is exported, the foreign purchaser has signed a statement acknowledging an awareness that the pesticide is not registered and cannot be sold for use in the United States. EPA requires that the exporter/manufacturer transmit the foreign purchaser acknowledgment to EPA and certify to EPA that the shipment did not occur before receiving the foreign purchaser statement. EPA sends copies of these statements to U.S. embassies in the importing countries, which then forward the statements to the appropriate government official in the importing country. EPA requires these statements for the first shipment of each unregistered product to a particular purchaser for each importing country, annually.

Section 17(b) requires EPA to notify foreign governments and appropriate international agencies regarding its actions to cancel or suspend a pesticide's U.S. registration. The notifications under section 17(b) benefit both the United States and the foreign governments. Foreign governments benefit because they are alerted to unreasonable hazards associated with using particular pesticides and can act to lessen exposure of their workers and citizens. The United States can benefit when a foreign government restricts using these harmful and potentially harmful pesticides on crops that are subsequently imported into the United States. As discussed in chapter 2, we reported in April 1989 that EPA did not have an effective program to determine whether these notification requirements were being met, and we made several recommendations to EPA to improve its notification program.[2]

## EPA Establishes Import Tolerances

Pesticides used in foreign countries are not required to be registered with EPA. However, foreign uses of pesticides that do not have an EPA tolerance or an exemption can result in a commodity's rejection at the

---

[2] Pesticides: Export of Unregistered Pesticides Is Not Adequately Monitored by EPA (GAO/RCED-89-128, Apr. 25, 1989).

U.S. entry point as a no-tolerance violation if residues are detected. EPA is authorized under FFDCA's section 408(e) to establish tolerances—sometimes called import tolerances—on its own initiative, or at the request of interested parties, when petitioners are not seeking tolerances under section 408(d) as a part of obtaining a U.S. registration under FIFRA. Pesticides used to produce food in the United States, however, must have both U.S. registrations and tolerances—if not exempted—for the pesticides' use. According to EPA's Chief, Policy and Special Projects Staff, Office of Pesticide Programs, import tolerances for pesticides that do not have U.S. registrations may be necessary because foreign countries (1) grow crops that are not grown in the United States and (2) have different pest and disease problems because of different climates.

To obtain an import tolerance under section 408(e), a petitioner must submit some of the same types of data required for petitions submitted under section 408(d)—product chemistry, residue chemistry, and toxicological data for pesticide use on each specific crop for which a tolerance is requested. Environmental fate data are not required for establishing import tolerances because the pesticides are applied in foreign countries and do not affect the environment of the United States. When pesticides are already registered in the United States, EPA may require only residue chemistry data for each new foreign crop use. In addition, the petitioner must discuss any controls regulating pesticides in the host country in which the pesticide will be used and provide some evidence that requirements for use in the host country have been met.

EPA does not maintain data that readily show the number of existing import tolerances established under FFDCA's section 408(e) provisions. However, EPA's Office of Pesticide Programs was able to identify several pesticides with tolerances that have been established or kept primarily for import purposes. According to the Chief of the Office of Pesticide Programs' Policy and Special Projects Staff, import tolerance petitions represent a small percentage of all tolerances approved by EPA. As of December 1988, 52 petitions were in active status. Of these, 47 had been reviewed and returned to the petitioner due to data deficiencies, and 5 were under review by EPA.

## Food and Drug Administration

FDA is responsible for enforcing EPA's pesticide residue tolerances for all food products—both domestic and imported—except meat, poultry, and eggs, which are monitored for pesticide residues by USDA. FDA also samples food offered for import for other adulterating conditions, such as microbial and filth contamination, foreign objects, and decomposition.

## FDA Enforces EPA Pesticide Standards

Under FFDCA, FDA is responsible for protecting the U.S. public from unsafe foods and other products. FDA is authorized to examine samples of foods being offered for import into the United States. A food shipment is considered adulterated if it contains, among other things, either (1) a pesticide residue that is not subject to an EPA-approved tolerance for that food or (2) a pesticide residue in an amount greater than the EPA tolerance level. In monitoring the entry of imported foods and removing adulterated products from the marketplace, FDA works in cooperation with the U.S. Customs Service, Department of the Treasury. Customs is responsible for (1) notifying FDA of all formal entries subject to FDA jurisdiction, (2) requiring importers to post a bond on imported food distributed to owners or consignees pending FDA approval for release into U.S. commerce, (3) ordering and supervising the export or destruction of foods FDA identifies as adulterated, and (4) imposing and collecting liquidated damages against importers who fail to export or destroy adulterated shipments.[3]

## FDA's Import Monitoring Program

Of FDA's 21 district offices, 20 selectively sample imported foods on the basis of various data and historical information on imports.[4] Our 1986 report on monitoring and enforcement activities for pesticide residues in imported foods recommended, among other things, that (1) FDA increase its sampling coverage of imported food to a wider range of imported foods and countries and (2) consider several options for obtaining additional information on pesticides actually used in foreign food production. As a result, FDA has expanded its guidance to field offices on criteria and additional data to be used in determining what countries and commodities to sample.[5]

In addition, according to its program documents, FDA performs (1) headquarters-initiated sampling to help ensure adequate national coverage of pesticides and (2) special emphasis surveys in each district on import sampling for country/commodity combinations not covered by a district's past monitoring. The district offices also conduct special surveys when information on foreign pesticide use indicates the use of pesticides that are not allowed for use on food in the United States. A new planning process, initiated in fiscal year 1988, was designed to require the district offices to document their annual pesticide sampling decisions for imported foods. FDA officials told us, however, that they expect it will take several years to fully achieve satisfactory district sampling plans and follow-up.

---

[3] We discussed the adequacy of FDA's and Custom's monitoring and enforcement activities in Pesticides: Better Sampling and Enforcement Needed on Imported Food (GAO/RCED-86-219, Sept. 26, 1986).

[4] FDA's Newark District Office does not have any responsibility for import inspections.

[5] According to FDA, it uses data purchased from the commercially produced Battelle World Agrochemical Databank to obtain information on what pesticides are being used on different crops in countries and regions of the world. According to FDA, the databank provides information on pesticides used on selected crops in about 25 to 30 countries that generally represent the pest and climatic conditions in various regions of the world.

### FDA Enforcement

FDA can request Customs to detain imported food that FDA suspects, either from past experience or initial sampling results, contains illegal pesticide residues. According to FDA's Regulatory Procedures Manual, when FDA suspects that a product may be violative given its past violative history and/or other information, it can invoke automatic detention, which requires that, until the automatic detention is removed, the importer provide certification from a private laboratory that shows each subsequent shipment is free of violative levels of the pesticide in question. According to FDA, it reviews the certifications to ensure their adequacy. For fresh produce, automatic detention remains in effect for all subsequent lots of the same produce for the rest of the growing season unless the grower/shipper demonstrates that the residue problem no longer exists or that the produce to be shipped originated in fields that were not treated with the pesticide in question.

FDA program documents indicated that, as of April 1988, FDA districts could recommend placing shippers under automatic detention after one violation; under prior practice, FDA did not recommend automatic detention with laboratory certification requirements for future shipments until two violations had occurred. Program documents also state that when illegal pesticide residues are found to be widespread on a particular commodity within a country, FDA can require certification from all shippers of that commodity in the country.

## U.S. Department of Agriculture

Two USDA agencies, the Agricultural Marketing Service (AMS) and the Animal and Plant Health Inspection Service (APHIS), carry out inspections of imported produce.

### AMS Inspects for Compliance With Quality Standards

AMS assesses the quality of some imported produce through mandatory and voluntary quality inspections that are paid for by the importer. Section 8e of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 608e-1), mandates that certain imported commodities meet minimum quality requirements during the effective dates of the applicable federal marketing orders. As of March 1988 the imported commodities covered by section 8e were avocados, dates (except dates for processing), filberts, grapefruit, table grapes, limes, olives (except Spanish-style onions), onions, oranges, Irish potatoes, prunes, raisins, tomatoes, and walnuts.[c] Section 8e requirements help keep inferior grades of a commodity from depressing the market for an entire crop. Because weather significantly influences crop production, requirements may change from season to season, as supply and demand change. According to an AMS official, when imported fresh produce does not pass mandatory inspections for quality, AMS permits the importer to (1) recondition the produce, (2) reship the produce, or (3) destroy the shipment.

Voluntary inspections are authorized by the Agricultural Marketing Act of 1946 (7 U.S.C. 1621 et seq.). These quality inspections evaluate the imported produce usually according to USDA's grade standards and/or other contract specifications. Importers and others use quality inspections (1) as a basis for determining the value of fresh produce in price determinations; (2) as evidence of compliance with contract specifications; (3) to enable appropriate labeling to be printed; and (4) in general, to facilitate the trade in fresh produce in both domestic and international markets. According to an AMS official, even when the mandatory import inspections do not apply, importers usually still want to have voluntary inspections to determine the quality of their product. AMS performs mandatory import inspections at the Customs control points at U.S. entry points. Voluntary inspections are conducted by AMS, either by itself or in cooperation with the states.

## APHIS Conducts Inspection and Quarantine Activities

APHIS is not directly involved in ensuring the safety or quality of imported fruits and vegetables. However, it conducts inspection and quarantine activities at U.S. entry points (and inspection, survey, and control activities at some foreign locations) to identify and prevent the introduction of exotic animal and plant diseases and pests that might threaten U.S. agriculture. APHIS develops and conducts preclearance programs, which include such activities as inspecting the products and determining what type of treatment is necessary to make the product pest-free for the United States.

---

[c] Legislation before the 101st Congress (H.R. 2026, H.R. 3567, and S. 1729) would add such commodities as kiwi fruit, nectarines, papayas, and plums to the list of imported commodities subject to mandatory inspection.

# International Organizations' Roles in Developing Food Safety Systems

Several international organizations play important roles in assisting developing countries to develop their food safety control systems. These organizations, whose activities are discussed below, include the U.N. Food and Agriculture Organization (FAO), U.N. World Health Organization (WHO), Codex Alimentarius Commission, Pan American Health Organization (PAHO), and Inter-American Institute for Cooperation on Agriculture (IICA).

## U.N. Food and Agriculture Organization

FAO adopted an International Code of Conduct on the Distribution and Use of Pesticides in 1985, and it has published guidelines to assist governments and industries in implementing the code. The FAO code and guidelines provide a framework for developing or improving pesticide control laws and regulations. As of January 1990, all of FAO's 158 member countries, including the United States, had endorsed the FAO code of conduct. A January 1989 FAO survey of governments on implementation of the code of conduct showed that many developing countries, including Latin American and Caribbean countries, were observing the code to varying degrees. However, the survey report also stated that developing countries reported that they generally have problems with the quality of pesticide formulations, packaging, and receiving technical assistance.

## U.N. World Health Organization

WHO has developed a pesticide hazard classification system that classifies pesticides into one of four hazard levels. The hazard level is determined according to the acute risk to health by single or multiple exposures to the pesticide over a short period of time. The system forms the basis of a harmonized pesticide labeling format recently adopted by many Central and South American countries. (See ch. 2.)

## Codex Alimentarius Commission

Codex, a subsidiary body of FAO and WHO, was established in 1963 to set international food standards to protect the health of consumers and to facilitate international trade in food through these harmonized standards. Codex has published international standards for the hygienic and nutritional quality of food; food additives; pesticide residues, including maximum residue limits (tolerance levels); contaminants; labeling and presentation; and methods of analysis and sampling. Member governments are encouraged to accept and incorporate the food standards and guidelines, which are developed by Codex working committees, into national legislation and regulations.

Developing countries that lack the research capabilities to independently develop food standards are able to adopt Codex international standards for domestic and exported foods. However, according to a Codex document, full acceptance of Codex standards is a slow process because governments must reconcile the continuing development of Codex standards with their changing national food laws, which reflect each country's own domestic health issues, environment, and consumer and industry concerns. The United States accepts Codex standards when the Codex tolerance is the same as the EPA tolerance for that pesticide/commodity combination. In some cases, EPA will revise its tolerance to match the Codex tolerance, such as when EPA has determined that the Codex tolerance is similar to the EPA tolerance and it does not compromise the U.S. consumers' safety.

FDA and USDA's Food Safety and Inspection Service have supported a proposal that EPA recommend that FDA and the Service use Codex standards for imported foods for which EPA does not have a tolerance. The proposed regulation states that this acceptance would not apply in cases where (1) EPA has canceled or suspended pesticides, (2) EPA has new toxicological information of concern, or (3) EPA questions the safety of dietary exposure to residues of the pesticide. EPA had not taken a position on the proposal at the time of this review.

Codex's Committee on Pesticide Residues has formed an ad hoc working group for pesticide residue problems in developing countries. The working group considers such matters as implementing the FAO International Code of Conduct on the Distribution and Use of Pesticides in developing countries, pesticide training activities, and the need for better pesticide residue data as a means of helping developing countries move towards better national pesticide control systems.

## Pan American Health Organization

PAHO is a member of the U.N. system of international agencies and, by agreement, an advisor to the Organization of American States regarding health-related matters. PAHO's membership includes countries in North, Central, and South America and in the Caribbean. Its objective is to generally promote and coordinate the efforts of these countries in combating disease, prolonging life, and promoting the physical and mental health of its peoples.

PAHO works cooperatively with other organizations in providing broad assistance to Latin American and Caribbean countries, including participation in regional conferences, training, mobilizing resources, and providing technical assistance. For example, as a result of the August 1985 Inter-American Conference on Food Protection, PAHO and FAO developed a 5-year regional program to strengthen the food safety and quality control programs in Latin American and Caribbean countries. PAHO is also working with FDA to develop a model of technical cooperation for developing food safety systems in Latin America and the Caribbean. The agencies chose Costa Rica in Central America and Jamaica in the Caribbean as countries on which to base the models.

## Inter-American Institute for Cooperation on Agriculture

IICA was founded in 1942 as an institution for agricultural research and graduate training in tropical agriculture. It gradually evolved into an intergovernmental technical organization designed to encourage, promote, and support the efforts of its 31 member nations to achieve agricultural development and rural well-being. IICA focuses its resources and technical capacity on modernizing agricultural technology and strengthening regional integration.

IICA helped to develop harmonized pesticide labeling and registration regulations, based on FAO/WHO guidelines, for Latin American countries. Beginning in 1981, it supported a series of regional meetings between government and agrochemical industry representatives to develop harmonized pesticide regulations. IICA encouraged ministries of agriculture in member countries to implement the standardized labeling and registration regulations. As of June 1988 many Central and South American countries had adopted a standard label format for pesticides sold in their countries.

# Status in Five Countries of Pesticides That Do Not Have EPA Tolerances Established for the Active Ingredients

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Alachlor[a] + Nudolin | NR | NR | R | NR | NR |
| Aldrin[b] | R[c] | NR | NR | NR | NR |
| Amitrole | NR | NR | R | NR | NR |
| Azamethiphos | NR | NR | NR | NR | R |
| Azinphos-ethyl | R | NR | R | NR | NR |
| Azocyclotin[d] | R | NR | NR | NR | NR |
| BHC (benzene hexachloride)[e] | NR | NR | NR | NR | R |
| Bioallethrin | NR | R | NR | NR | NR |
| Bitertanol[d] | R | NR | NR | NR | R |
| Blasticidin-S | NR | R | R | NR | NR |
| BPMC (Fenobucarb) | NR | R | NR | NR | NR |
| Brodifacoum | NR | R | NR | R | R |
| Bromadiolone | NR | NR | NR | NR | R |
| Bupirimate | R | NR | NR | NR | NR |
| Buprofezin | NR | NR | NR | R | NR |
| Buthidazole | NR | NR | R | R | NR |
| Butocarboxim | NR | NR | NR | R | NR |
| Caldo Bordeles + Cufraneb | NR | NR | R | NR | NR |
| Captan[f] + Metoxicloro | NR | NR | R | NR | NR |
| Carbaxim + Captan[f] | NR | NR | R | NR | NR |
| Cartap[d] | NR | R | NR | NR | NR |
| Chlordane[g] | NR | R | R | R[c] | R |
| Chlordane[g] + Pentacl | NR | R | NR | NR | NR |
| Chlorophacinone | NR | R | R | NR | NR |
| Chlorotoluron | NR | NR | NR | NR | R |
| Ciometrinilo | NR | R | NR | NR | NR |
| Citrolina | NR | NR | NR | NR | R |
| Colecalciferol | NR | NR | NR | NR | R |
| Coumachlor | NR | NR | NR | NR | R |
| Coumachlor + Sulfamilamide | NR | NR | R | NR | NR |
| Coumatetralyl | NR | R | R | R | R |
| Cyfloxylate | NR | NR | R | NR | NR |
| Cymoxanil + Mancozeb[f] | NR | NR | R | NR | NR |
| DBCP (dibromochloropropane) | NR | NR | R[c] | R[c] | NR |
| Demeton-(0 or S)-methyl | R | R | R | R | R |
| Dichlofluanid[d] | R | R | NR | R | NR |
| Dieldrin[b] | NR | NR | R[c] | NR | NR |

(continued)

| **Pesticide** | **Chile** | **Costa Rica** | **Dominican Republic** | **Guatemala** | **Mexico** |
|---|---|---|---|---|---|
| Dienochlor | R | R | R | R | R |
| Dietanolamina | NR | R | NR | NR | NR |
| Difenacoum | NR | NR | R | NR | NR |
| Dimethirimol | NR | NR | R | NR | NR |
| Dimethylamine | NR | R | NR | R | NR |
| Dimethyl urea | NR | NR | R | R | NR |
| Dinobuton | NR | NR | R | NR | NR |
| Dioctil Sulfosun | NR | R | NR | NR | NR |
| Diphacinone | NR | NR | R | R | R |
| Dodemorph | NR | R | R | R | R |
| Edifenphos[d] | NR | R | R | R | R |
| Epibloc | NR | NR | NR | R | NR |
| Ethidimuron | NR | NR | NR | NR | R |
| Ethiofencarb[d] | R | NR | NR | NR | NR |
| Fenaminosulf | R | R | NR | R | NR |
| Fentin acetate | R | R | R | R | R |
| Flamprop-methyl | NR | NR | NR | NR | R |
| Flocoumafen | NR | NR | NR | R | NR |
| Flubenzimine | R | NR | NR | NR | NR |
| Flumetrina | NR | NR | NR | NR | R |
| Fluorodifen | NR | NR | R | NR | NR |
| Fluosilicato | NR | NR | R | NR | NR |
| Flutriafol | R | NR | NR | NR | NR |
| Fonofos | NR | NR | R | NR | NR |
| Glufosinate | NR | NR | NR | NR | R |
| Guazatine[d] | NR | NR | R | NR | NR |
| Hexaconazole | NR | NR | NR | R | NR |
| IBP (Iprobenfos) | NR | R | NR | NR | NR |
| Ioxynil + 2,4-D[f] | NR | R | NR | NR | NR |
| Ioxynil octanoate | NR | NR | R | NR | NR |
| Isazofos | NR | R | R | R | NR |
| Isoforona | NR | R | NR | NR | NR |
| Isoproturon | NR | NR | NR | NR | R |
| Kasugamycin | R | R | R | R | R |
| MAFA | NR | R | NR | R | NR |
| MCCEP | NR | NR | R | NR | NR |
| Mephosfolan | NR | R | R | R | NR |
| Metaldehyde[h] + Tri. Arsenate | NR | NR | R | NR | NR |
| Methabenzthiazuron + Amitrole | NR | R | NR | NR | NR |
| Metham-sodium | NR | NR | R | R | R |

(continued)

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Methyl isothiocyanate | NR | NR | NR | NR | R |
| Mirex | NR | NR | NR | R | NR |
| Naptalam | NR | R | R | NR | NR |
| Nitrofen (DCP) | NR | NR | R | NR | NR |
| Ofurace | NR | R | NR | NR | NR |
| Omethoate[d] | R | NR | NR | NR | R |
| Oxycarboxin | NR | R | R | R | R |
| Penconazole | NR | NR | NR | R | NR |
| Penconazole + Mancozeb[f] | R | NR | NR | NR | NR |
| Pentachlorophenol | NR | NR | NR | R | R |
| Phenothiol | NR | R | NR | NR | NR |
| Phenothrin[f] | NR | R | NR | NR | NR |
| Phenthoate[d] | R | NR | R | R | R |
| Phoxim[d] | R | R | R | R | R |
| Piperophos + Dimetnametryn | NR | R | R | R | NR |
| Pirimicarb[d] | R | R | NR | R | R |
| Pirimidil | NR | NR | R | NR | NR |
| Propamocarb[d] | NR | NR | R | R | NR |
| Prothiofos | R | R | NR | R | NR |
| Prothoate | NR | NR | R | NR | NR |
| Pyracarbolid | NR | NR | NR | R | NR |
| Pyrazophos | R | R | R | NR | R |
| Quinalphos | R | NR | NR | NR | NR |
| Sal Sodio Disp | NR | R | NR | NR | NR |
| Sal Sodio Naft | NR | R | NR | NR | NR |
| Tetracloruro de Carbono + Acrylo | NR | NR | R | NR | NR |
| Tetramethrin | NR | R | NR | NR | R |
| Thiometon[d] | R | NR | NR | NR | NR |
| Tiocarbazil | NR | NR | R | NR | NR |
| Tolclofos-methyl | NR | R | NR | NR | NR |

(continued)

| Pesticide | Chile | Costa Rica | Dominican Republic | Guatemala | Mexico |
|---|---|---|---|---|---|
| Triazophos[i] | NR | NR | R | R | R |
| Triflumuron | R | NR | NR | NR | R |
| Xiligen | NR | R | NR | NR | NR |

Legend

NR = Not registered for use

R = Registered for use

[a] EPA has tolerances for this chemical, but not for combination shown

[b] EPA has action levels and Codex has maximum residue limits (MRLs) for this chemical

[c] This pesticide is on the country's registration list but has been officially prohibited

[d] Codex has MRLs for this chemical

[e] EPA has action levels for this chemical

[f] EPA has tolerances and Codex has MRLs for this chemical

[g] EPA has action levels and Codex has extraneous residue limits for this chemical

[h] 40 C.F.R. 185.4025 allows preharvest use of this chemical on strawberries, but sets a zero tolerance for residues

[i] Codex has temporary MRLs for this chemical

Source: Government pesticide registration lists for Chile, Costa Rica, the Dominican Republic, Guatemala, and Mexico for 1987 or 1988. (See ch. 1, fn. 13.) EPA verified in 1989 that, according to its records, the pesticides (except as shown in the footnotes) do not have tolerances established for any food use in the United States. Where possible, English spellings and other information on chemicals were obtained from the Code of Federal Regulations, title 40 parts 180 and 185 (revised as of July 1, 1989); Farm Chemicals Handbook (Willoughby, Ohio: Meister Publishing Co.), 1987; Glossary of Pesticide Chemicals, FDA, Sept. 1988; Guide to Codex Maximum Limits for Pesticide Residues, Part 2, CAC/PR 2 - 1988, Apr. 1988, issued by The Netherlands; The Pesticide Chemical News Guide, Reo, P.D., and M.B. Duggan, eds. (Washington, D.C.: Louis Rothschild, Jr.), June 1, 1988; and The Pesticide Manual, A World Compendium, 8th ed., C.R. Worthing, ed. (Thorton Heath: The British Crop Protection Council), 1987

Appendix VI

# Major Contributors to This Report

| | |
|---|---|
| Resources, Community, and Economic Development Division Washington, D.C. | William E. Gahr, Associate Director<br>Jerilynn B. Hoy, Assignment Manager<br>Karen S. Savia, Evaluator-in-Charge<br>Irvin T. Williams, Evaluator<br>Nancy A. Boardman, Evaluator<br>Carol Herrnstadt Shulman, Reports Analyst |
| San Francisco Regional Office | Albert T. Voris, Senior Evaluator<br>Kerry G. Dunn, Evaluator |

## PREPARED STATEMENT OF THE U.S. FOOD AND DRUG ADMINISTRATION, PUBLIC HEALTH SERVICES, DEPARTMENT OF HEALTH AND HUMAN SERVICES, ROCKVILLE, MD

Mr. Chairman:

This statement is being submitted for the record of the hearing on S. 2227, the "Pesticide Export Reform Act of 1990." The bill, which amends both the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetic Act (FDCA), would, among other things, prohibit or restrict exportation of certain pesticides and require that importers declare the presence of any pesticides that may be found in the products they import.

We support the general need to strengthen international information exchanges on pesticides used in food production. We defer to the Environmental Protection Agency (EPA) concerning the provisions of the bill affecting pesticide exports. This statement will provide background on the strategy and results of the FDA's pesticide monitoring programs, and outline FDA's concerns about the provisions of S. 2227 pertaining to the FDCA and imported food products.

### BACKGROUND

FDA shares responsibility with EPA in the Federal regulation of pesticides: EPA registers pesticides for use and establishes tolerances for the amount of a pesticide residue that may legally remain in or on foods; FDA enforces compliance with EPA's tolerances. These tolerances for pesticide residues apply equally to imported and domestically produced foods. FDA's monitoring of thousands of shipments of domestic and imported foods has shown that pesticide residues found in the vast majority of the shipments comply with tolerances established by EPA. In those instances where a violation occurs, it usually involves a pesticide registered by EPA for some commodities, but not for the particular food commodity on which it was detected. In most of these cases, however, the violative residue is still lower than tolerances that have been established for use of the same pesticide on other foods.

The FDCA authorizes FDA to bring enforcement action against adulterated food, which, in the case of imported food found to be adulterated with a pesticide residue, means FDA is authorized to refuse entry of the food into U.S. commerce. In addition to denying entry to an individual shipment of food found to be adulterated, FDA may initiate automatic detention of subsequent, related shipments of the food if there is reason to believe that the illegal residue problem might continue. Under this enforcement control measure, shipments of the suspect food are automatically prevented from entering domestic commerce until the importer, shipper, producer, or a responsible agency of the exporting country certifies to FDA by laboratory analyses that the shipments conform to the requirements of U.S. law.

### FDA MONITORING PROGRAMS

FDA's strategy for optimum utilization of existing pesticide program resources includes targeting foods having high dietary significance, as well as foods with past pesticide residue problems. FDA has also adjusted its sampling strategy and other facets of the pesticide program to fill gaps in our knowledge about particular food/pesticide/country combinations where past monitoring may have been limited, or in which the exporting country provides a high volume of the commodity.

FDA also conducts the Total Diet Study to determine consumers' actual dietary exposure to pesticide residues. The levels of residues found in each food item, coupled with information on food consumption patterns in the United States, enable us to estimate the daily intake of over 200 pesticide residues for eight age/sex groups of American consumers from infants to senior citizens. FDA's Total Diet Study has continued to show that daily intakes of pesticide residues are consistently well below acceptable daily intakes (ADI) established by the World Health Organization (WHO). (An ADI is defined by WHO as the maximum daily intake of a chemical which, if consumed daily during a person's entire lifetime, would be without an appreciable risk to health.)

### IMPORTS SAMPLING PROGRAM

Because of concerns about pesticide usage in foreign countries, including those that may not have effective national pesticide control systems, FDA samples a greater proportion of imported foods, mainly fresh produce, than it does domestically grown food. Under this program, FDA analyzes for pesticide residues, including most of those pesticides which have had their United States registrations canceled or severely restricted. While FDA does not routinely examine imported foods for all possible pesticide residues, results of FDA monitoring show that imported foods generally do not contain either elevated levels or high incidence of pesticide residues. This observation holds for most or all of the so-called "banned" pesticides.

In 1988, FDA analyzed a total of 10,475 imported food samples from 89 countries for pesticide residues. This represents 57 percent of the total number of samples. It is important to note that less than 1 percent of the residues in the sampled imports exceed U.S. tolerances, just as less than 1 percent of the domestic samples exceed tolerances. The majority of the illegal import findings were residues of pesticides that do not have U.S. tolerances for the particular commodities in which they were found, and thus, any level measured may be considered violative.

FDA is actively pursuing acquisition of foreign pesticide usage data from commercial sources and through cooperation with the governments of food exporting countries. For example, FDA subscribes to the Battelle World Agrochemical Data Bank, a computerized data base of information on selected countries' use of pesticides on specific commodities. FDA uses these data to assist in designing its sampling plans, provide information to its field laboratories on foreign pesticide usage, and target detection of pesticides, especially those which are not registered in the United States.

In addition, as part of the Pesticide Monitoring Improvements Act of 1988 (Public Law 100-418), FDA has contacted 37 countries, with an emphasis on countries that are major food exporters to the United States, to obtain information on their pesticide usage. We have met with these countries' representatives, and, to date, several have provided us with information.

Pesticide usage data acquired from these sources will assist the Agency in better directing pesticide residue monitoring toward those pesticides most likely to have been used on imported commodities, thereby enabling the Agency to increase its effectiveness in the monitoring of imported foods for residues of particular pesticides.

FDA also supports international efforts, such as the work of the Codex Alimentarius Commission, sponsored by the Food and Agriculture Organization (FAO) and WHO. Codex is an intergovernmental organization that has established committees to provide a forum whereby participating governments develop standards for foods in international commerce. One such committee, the Codex Committee on Pesticide Residues, is working to harmonize pesticide residue standards to facilitate international trade.

FDA, along with EPA and USDA, is an active participant in Codex, and believes that efforts to establish internationally agreed upon tolerances for pesticide residues in foods offer promise in terms of enhancing food safety and ensuring that food products in international commerce meet safety standards. The Codex Committee also holds potential for providing a level playing field for all farmers, not just those in the United States. FDA is working with EPA and other organizations to evaluate the feasibility and encourage the adoption, where possible, of Codex standards by participating nations.

## S. 2227

FDA supports ongoing efforts to share information on our requirements with other countries that export food to the United States, with the aim of improving compliance with U.S. standards. FDA has concerns, however, about the provisions of S. 2227 that deal with requirements of importers to declare pesticide usage information on import documents and with provisions of the bill dealing with "practical" analytical methods, as explained below.

### PESTICIDE USAGE DECLARATION

Section 203 of S. 2227 would prevent food shipments offered for import into the United States from being admitted unless the importer files a document listing the pesticides "known to be or customarily used on, or in connection with the production of, food by any agricultural producer or group of agricultural producers of the food." FDA would, of course, welcome any additional accurate information on pesticides that could be provided on commodities entering U.S. ports. FDA believes, however, that this proposed requirement is logistically unworkable. Also, FDA believes that such a requirement would be viewed by the governments of exporting countries as a nontariff trade barrier, because at the present time, disclosure of pesticide use is not required on domestically produced commodities.

This provision assumes that it is feasible for the importer to determine accurately, through growers and exporters in the country of origin, the pesticides that have been or may have been used on the particular commodity during its cultivation. FDA does not believe such information will be available to importers. Accurate pesticide usage data, even that tabulated on a national rather than local level, is extremely difficult to obtain. Commingling of production lots during the various stages of production and shipment make accurate statements about pesticide usage on a particular shipment virtually impossible.

FDA appreciates the intent of trying to provide the agency with more accurate information about pesticides on imported products. FDA believes that participation in ongoing efforts to share pesticide information internationally and adoption of Codex or other agreements regarding the acceptability of specific chemicals in participating countries, as described above, would be more appropriate and effective than the measures proposed by the bill.

### METHODS FOR DETECTION/FDA-EPA CONSULTATION

S. 2227 would prohibit EPA from establishing or maintaining a tolerance unless a practical method for detecting and measuring residues of the pesticide were available. A method is considered to be "practical," if it may be performed "routine[ly] as part of surveillance and compliance sampling with existing available personnel, equipment, and other resources." The bill emphasizes methods that will detect more than one pesticide chemical, but single residue methods may be considered practical if no other method to detect a particular pesticide exists. Methods that detect only a single pesticide may still be considered practical, but the tolerances for these pesticides would expire biennially. Upon expiration of such tolerances, EPA may renew them for 2 more years.

FDA supports the concept of formal consultation among the agencies to assure that a suitable analytical method exists before a tolerance is established for a pesticide residue on a particular commodity. EPA's current policy is to require a validated analytical method before establishing a tolerance and to share this information on methods with the FDA before a tolerance is adopted. FDA conducts research to develop methods for pesticides already in use. Before adopting a particular method for use in its monitoring programs, FDA scientists consider, among other things, whether the method can measure a residue at or below the specified tolerance, what the complexity, reliability, and sensitivity of that method may be, how much time would be required to perform an analysis, and whether it is a multi- or single-residue method.

FDA is concerned, that the wording may be an attempt to direct FDA's monitoring priorities, or require FDA to use each method on all samples collected, or in some other way restrict our ability to select the most appropriate analytical method in a particular situation. Such requirements are neither necessary nor desirable from a public health standpoint. Clearly, both the FDA and EPA support the development of improved methods to detect pesticide residues. We are concerned, however, that the provisions of S. 2227 could be interpreted to restrict the introduction or prevent the continued use of pesticides that may be more environmentally sound.

### TERMINATION OF TOLERANCES

Although FDA supports the concept of periodically reviewing analytical methods to determine whether they are still suitable, this provision of the bill, as worded, has the potential to create enforcement and resource demands on U.S. regulatory agencies that are not justified in terms of public health benefit. Requiring a biennial review of tolerances would be extremely resource intensive, and hamper the development of new methods for conducting these reviews. The administration's food safety proposals explicitly authorize EPA to set time-limited tolerances tailored to the individual pesticide. We believe this approach is more practical and appropriate than a flat 2-year expiration date, and it reflects the reality that methods considerations are not the only factors that are important in deciding whether tolerances should be continued. Termination of a tolerance *prior* to renewal by EPA would make adulterated, at least temporarily, food that had been legally treated with a pesticide. This provision should be redrafted to, at a minimum, include a "pipeline" provision allowing foods that have been legally treated to remain on the market pending EPA review.

### CONCLUSION

In summary, although FDA supports the concept of securing more accurate information about pesticides used on imported products, we believe the import provisions of S. 2227 will not accomplish this goal. We also believe that the bill, if enacted, would unfairly burden importers to provide information not required of domestic producers, and would do so without improving the safety of the food supply. For these reasons, we recommend that the regulatory scheme envisioned in this bill should be reconsidered. In its current form, we cannot support the bill.

---

## PREPARED STATEMENT OF JANET S. HATHAWAY, SENIOR PROJECT ATTORNEY AND PIERRE R. ERVILLE, LEGAL INTERN, ON BEHALF OF THE NATURAL RESOURCES DEFENSE COUNCIL (NRDC), WASHINGTON, DC

### I. INTRODUCTION

The Natural Resources Defense Council (NRDC) appreciates this opportunity to testify in support of S. 2227, the Pesticide Export Reform Act of 1990. NRDC is a private, nonprofit environmental organization of lawyers and scientists, representing over 130,000 members nationwide.

We commend Chairman Leahy, Senator Gore, Senator Fowler, and others involved in developing this important legislation. We strongly support the goal of restricting the trade and use of hazardous pesticides to ensure that countries receiving such pesticides have the knowledge and the resources to control the use of these substances, whether in agriculture or in industry.

The bill accomplishes many desirable ends:

- It corrects a double standard that currently puts American farmers at a competitive disadvantage relative to growers abroad.
- It cuts down on American consumers' potential exposure to toxic pesticide residues in foods, both at home and abroad.
- It promotes safer global working conditions for handlers of pesticides.
- It reduces the traffic in and use of the most dangerous pesticides, thereby protecting the environment and improving public health protection worldwide.
- It provides a framework for an international accord limiting the export of dangerous pesticides.

The following summary highlights the most significant sections of the bill.

### II. S. 2227 AMENDS FIFRA TO LIMIT EXPORTS OF PARTICULARLY DANGEROUS PESTICIDES

This bill would amend section 17 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to prohibit the export of pesticides to any country that lacks the appropriate statutory or regulatory infrastructure needed to monitor pesticide use and to safeguard health and the environment. The bill also prohibits the export of any pesticide that is not registered with the EPA, although it exempts certain experimental uses of such pesticides. Registered pesticides may only be exported for use consistent with the conditions of their registrations. For example, a pesticide which is not registered for any agricultural uses in the United States cannot be exported for agricultural uses.

Finally, the bill requires the prior written informed consent (PIC) of an appropriate official in the proposed country of use for pesticides which have been identified as particularly problematic in any of several ways. Consent would be required whenever the pesticide intended for export: (1) is classified as a "restricted use" pesticide; (2) is suspended; (3) is canceled; (4) is under review for suspension or cancellation; (5) is conditionally registered; (6) or is identified by the World Health Organization as "extremely" or "highly" hazardous.

### III. IMPORTANCE OF THESE PROPOSED AMENDMENTS

The proposed amendments summarized above reflect the increasingly acknowledged need for more careful regulation of the export of dangerous substances. At the international level, this almost universally perceived need has resulted in several significant recent agreements. Among these are the International Code of Conduct on the Distribution and Use of Pesticides, the 1989 Basel Convention on the Control of the Transboundary Movement of Hazardous Wastes, and the 1989-amended London Guidelines for the Exchange of Information on Chemicals in International Trade. These landmark achievements signal a global acknowledgement of certain duties and responsibilities that are incumbent upon those countries that produce or market substances which can cause harm to human health or to the environment.

**Uppermost among these responsibilities is the duty to stop the export of toxic products to nations that simply are not yet equipped to handle those products in a safe way.** The obvious reason for this is that until such countries are equipped with the infrastructure necessary to monitor and control the handling and application of highly hazardous pesticides, they are at tremendous risk of suffering disastrous public health and environmental consequences.

Some pesticide manufacturers and exporters may answer that such a policy is paternalistic, or that it interferes with the sovereignty of other nations. This kind of argument is today an anachronism. Moreover, such arguments attempt to disguise the painful reality of the situation. First, many countries lack the information and/or the technical expertise necessary to conduct meaningful health and safety evaluations of pesticides. Many countries also lack the financial resources for thorough analytical work and for the implementation and enforcement of safety procedures. Many countries lack sufficient resources to train pesticide applicators and supply them with protective equipment and clothing. Finally, many countries are incapable of effectively stopping the import of pesticides which they decide to ban. The countries producing the potentially harmful substances have a disproportionately great influence over the conditions and circumstances in which these pesticides will be used. Therefore, the pesticide exporting countries should also take on a greater portion of the responsibility for safeguarding public health and the global environment.

Moreover, there is the additional consideration of **fairness to our own American farming community.** By allowing the export of pesticides that are banned for use in this country, Congress has instituted a double standard which grants an unfair competitive advantage to foreign growers and shippers over our own. On the other hand, by prohibiting the export of such pesticides, Congress would eliminate the double standard, thus allowing American farmers to compete on an even playing field.

Banning the export of all "severely restricted" pesticides [1] to countries that lack the appropriate relevant statutory or regulatory infrastructure will help to protect people: all people, including Americans, from especially harmful pesticides. While the Food and Drug Administration does monitor the import of food products into this country, it only tests a very small percentage of food shipments for chemical contamination.[2] Moreover, delays often extending for weeks can and do occur before test results are finally available.[3] In fact, shipments to the United States are often sold and consumed before test results are in.[4] Permitting the export of dangerous pesticides can result in a "Circle of Poison" of frequent and occasionally widespread exposure in the United States to pesticides long banned by U.S. Government agencies.

The U.S. General Accounting Office (GAO) last year reported to Congress that this country supplies approximately half the pesticides imported into most Latin American nations, who in turn supply us with the majority of the fresh fruits and vegetables we consume during the winter months.[5] The pesticides we export are likely to be among the pesticides on the produce we import. This is true even when the U.S. exports pesticides which domestic growers are prohibited from using here. **Adoption of the S. 2227 amendments will help to eliminate the phenomenon of U.S. consumers being exposed to banned, unregistered or severely restricted pesticides in imported foods.**

Americans do travel abroad, as well as consume imported foods at home. As a result of the current state of the law, the pesticides that the EPA considers so hazardous to our health that it decides to ban their use in this country nevertheless routinely appear on our dinner plates abroad. Millions of American tourists, whether on vacation or on business trips, are thus potentially being exposed to substances manufactured in this country yet prohibited for use here. This bill would eliminate that disquieting loophole.

Lastly, implementation of the internationally sanctioned prior informed consent (PIC) procedures, as outlined in this bill, represents substantial progress toward **increased accountability on the part of both pesticide exporters and importers.**

---

[1] "Severely restricted" pesticides include pesticides which are: classified as "restricted-use" pesticides; canceled or suspended; subject to a suspension or cancellation proceeding; subject to EPA's "interior administrative review"; conditionally registered pesticides; or pesticides designated by the World Health Organization as "highly" or "extremely" hazardous.

[2] "FDA annually samples less than 1 percent of approximately 1 million imported food shipments." General Accounting Office, "Pesticides: Better Sampling and Enforcement Needed on Imported Food," page 3, September 1986.

[3] In 1983, the *average* delay was 18 days. General Accounting Office, "Pesticides: Need to Enhance FDA's Ability to Protect the Public from Illegal Residues," page 53, October 1986.

[4] *Id.*

[5] General Accounting Office testimony. Statement of J. Dexter Peach, Assistant Comptroller General, Resources, Community, and Economic Development Division, before the Subcommittee on Environment, Energy, and Natural Resources of the House Committee on Government Operations, Wednesday, May 3, 1989, p. 4.

These amendments require the exporter to comport with the international standards promulgated by the Food and Agriculture Organization of the United Nations. In addition, the bill requires the exporter to report basic facts about the shipment, such as the intended date, the quantity of pesticide, the manner of its transport, and the raw agricultural commodity on which the pesticide is to be used. In turn, appropriate officials in the intended country of use will be requested to provide written consent or objections, with or without conditions to the pesticide shipment. Should the EPA not receive that country's explicit written consent, no export will be permitted.

## IV. CONCLUSION

In conclusion, NRDC enthusiastically endorses S. 2227, and urges its swift adoption by Congress. The bill propels the United States into a leadership position in the international control of trade in especially dangerous pesticides. This legislation will be welcomed by less developed nations, which are justifiably alarmed about the import into their countries of hazardous substances over which they can exert little if any control. It will also benefit both U.S. farmers and consumers. It will lead to significantly fewer dangerous pesticides in the food we eat and in our environment both domestically and abroad. It represents a forward-looking policy whose time has come.

---

## PREPARED STATEMENT OF WARREN E. STICKLE, PRESIDENT, CHEMICAL PRODUCERS AND DISTRIBUTORS ASSOCIATION (CPDA)

Mr. Chairman, my name is Warren E. Stickle. I am president of the Chemical Producers and Distributors Association. I thank you for this opportunity to discuss CPDA's position on S. 2227, the "Pesticide Export Reform Act of 1990."

The Chemical Producers and Distributors Association is a nonprofit, voluntary membership association comprised of some 78 member companies engaged in the manufacture, formulation, distribution and sale of $3-billion worth of products used on food, feed and fiber crops, and for lawn, garden and turf care.

We commend your effort, Mr. Chairman, to strengthen and improve upon section 17 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) dealing with the export of pesticides and the improvement of monitoring and enforcement activities on residues of imported foods to protect human health in the United States as well as abroad.

Furthermore, we concur that the United States should take the lead role with respect to international pesticide regulations and should take steps to educate other countries about the risks and benefits of pesticidal use. As it now stands, EPA is proposing new policies and goals regarding international pesticide activities which provide for more information-sharing, technical assistance and harmonization of tolerance standards with foreign countries. The establishment of these mechanisms will go far in facilitating communication between importing and exporting countries and will allow each to make informed decisions.

While we support the spirit of this proposal, we feel the American public can be better served by additional clarifications. Some of the provisions in S. 2227 would, in effect, disrupt lawful pesticide export activities, and, at the same time, do nothing in terms of enhancing the safety of our food supply. My discussion focuses on these suggested refinements.

As proposed, section 17(a) would further require that all exported pesticides be registered for use in the United States. This provision seems to imply that an unregistered pesticide equates to an unsafe pesticide, and, thus, as read, is somewhat vague and overbroad.

There are numerous reasons why a product may not be registered with EPA. These include, but are not limited to:

(A) The producer does not want to subject himself to current FIFRA data compensation liabilities. With the threat of millions of dollars in data compensation payments, many would-be competitors back away from the U.S. market.

(B) The producer is concerned with the current wave of product liability litigation in the United States and does not want to fall victim to potential lawsuit.

(C) The producer does not feel the costs involved in generating EPA data can be justified by potential U.S. sales.

(D) Many foreign pesticide manufacturers have made arrangements with large multinational firms to compete in the U.S. market. Thus, they will not allow their products to be registered in the United States and will only sell manufacturer goods which are to be formulated and exported.

(E) Different analytical methods used by countries in measuring active ingredients.

(F) Crops are not grown in the United States or the particular pests do not exist domestically.

Thus, this legislation could have great impact on many companies. For example, one of our companies sells natural pyrethrins in the United States and Canada, via an EPA registered pesticide, according to an EPA accepted AOAC method of analysis. These products can be sold in the United States and Canada because they conform to standards accepted in these countries, but cannot be sold anywhere else in the world with an EPA registration, its EPA label or its AOAC method of analysis.

The exact same product, with the identical six esters, is not analytically measured by the same standard. The rest of the world abides by the analytical method developed and approved by the Pyrethrin Board of Kenya (PBK). The internationally accepted PBK creates a differential of 10 percent in favor of PBK. For example, a 100 percent concentration in the United States might be 10 ounces, but the identical concentrate in Kenya would be recorded as 11 ounces. A standard 20 percent pyrethrin extract measures 22.11 percent in Kenya, despite the fact that they are an identical product.

For 60 years, a conflict over analytical measurement has existed between the United States and Kenya, and for almost 35 years, this company has exported a pyrethrin product, identical to its U.S. counterpart, to the rest of the world with a label approved and accepted by PBK and the world.

Because of the differences in analytical methods, these products are *NOT* registered in the United States or Canada. Provisions of S. 2227, requiring the export of only EPA registered pesticides, would prevent the sale of these products overseas. If the company could not export these products, we feel confident that other companies in the United Kingdom, France, West Germany and Australia would immediately step forward to fill the void, further reducing American export opportunities.

To register this identical pyrethrin product in the United States, according to EPA's accepted AOAC analytical methods, the concentrations would have to be labeled 22.11 percent concentrate (not 20 percent). Since there would be a perceived "difference" in concentration, the EPA would probably treat this product as a "new" product, requiring a complete set of data based on the testing of this concentrate. It would not be a "me-too" registration. Consequently, it could take between 2 and 3 years or more to register this "new" product, during which time period the product could not be sold on the international market. The cost of this registration effort, with product chemistry testing, and other testing, could run between $75,000 to $100,000.

Many other countries have chemical processing plants and produce and sell these products throughout the world. Placing more stringent restrictions on American exports will only cause prices to rise.

As a result, foreign agriculture producers will simply turn to other foreign pesticide manufacturers for their supplies. One country will simply import pesticides from a second country which has no regulatory program in place or manufacture the pesticide domestically within the importing country. These chemicals are more likely than not to be of a lesser or inferior quality than those chemicals produced in the United States. Still, there is no way to prevent foods imported into the United States from having been treated with these pesticides. Fortunately, the tolerances set by EPA apply to all food commodities circulating in the United States regardless of origin. Thus, it can be seen that unilateral export controls will not fully solve the problem.

The United States must improve the monitoring and enforcement procedures of both the FDA and USDA. There have been steps in this direction with the enactment of the Pesticide Monitoring Improvements Act. Thus, exchanging information in this manner will allow the FDA and USDA to identify problem chemicals and, in turn, the countries from which they are imported. This action complemented by the move toward internationally consistent tolerances goes to the core of ensuring the safety of food products imported in the United States. An examination of FDA's monitoring shows that intakes of pesticide residues are currently below the standards set by FDA, FAO, and WHO. Additionally, the FDA has the tools to get certain imported foods off the market if violations are shown.

Finally, consideration should be given to the multilingual labeling requirement as proposed in S. 2227. Since literacy is a problem not restricted to the United States, a pictorial labeling requirement may be of far greater benefit than multilingual labeling. This label could be in the form of a graphic identifying the hazards that may occur if used incorrectly.

We support the appropriate regulation of pesticide exports and fully support the means by which we can improve the exchange of information between exporters and other governments as well as companies and end-users of American pesticide exports. Recently, EPA proposed to revise its policy concerning FIFRA section 17. We believe that these concerns about pesticide exports should be addressed as part of the regulatory process, not the legislative process. We ought to give this newly initiated EPA proposal an opportunity to work before we superimpose legislative language on FIFRA.

In addition, we believe that Congress ought to support the international activities of the Department of Commerce, the U.S. Trade Representative, and the EPA, as well as the United Nations' FAO, WHO and UNEP organizations, all of whom are grappling with pesticide trade data, information, CBI and notification procedures.

This international problem should not be resolved by unilateral U.S. requirements for: (1) registration of exports, (2) export of only U.S.A. registered products, (3) consent by foreign governments prior to shipment, (4) a limited list of approved foreign countries for USA imports, specifically including most of the Third World, and (5) a U.S. audit of foreign countries.

S. 2227 suggests a system of "approved countries of use," and includes many of our allies around the world, as well as our chief economic partners. Such a list might be offensive to them. Countries not on the list, however, are effectively blacklisted, including Mexico, Israel, India, Brazil, New Zealand, Korea, Taiwan and Indonesia. These countries may be equally concerned about the provisions of S. 2227 and the effects it may have on their economy, agricultural production, and public health. In essence, should our international pesticides policy be designed to penalize other nations for not accepting our scientific and regulatory interpretations? Most of these countries are quite capable of making their own judgment about the risks and benefits of pesticides and are by far and away a better judge of their own local and regional needs than we are.

Many times, the U.S. pesticide products are manufactured for pests that do not exist in the United States or for crops that are more effectively grown in the Third World such as coffee, cocoa, and bananas. We must not assume that foreign countries are incapable of regulating their own environment, their own crops, and their use of pesticides. We should not assume that products sold in the Third World, whether from the U.S.A., Japan, Taiwan, Korea, etc., are untested, unregulated or unsafe. In fact, many of our trading partners and Third World countries are rapidly accepting many of our regulatory concepts.

We at CPDA believe that the provisions of S. 2227 will have a disadvantageous impact on American trade relations. Under section 105 (Imports and Exports), S. 2227 creates a one-way process of notification, imposing restrictions on U.S. pesticide exports, but poses no limit for a foreign response. Before an American company can export pesticide products, it must have "a written response consenting to or objecting to, the import of the pesticide that is the subject of such notice" (subparagraph 5(E)(i)). Such a reply could take 30, 90, 120, or 180 days, and have a disastrous impact on U.S. trade.

Why would a Third World country want to go through a complicated set of U.S. regulations when they could buy directly from Taiwan, Korea, Brazil or Mexico? Thus, we place our own manufacturers in an economic straitjacket. While we export American jobs to the Third World, we further stimulate an imbalance in our trade relations.

For example, if the acknowledgement of notification is not forthcoming from the importing country within 30 days, the Administrator (after satisfying himself that notification was delivered), should inform the American exporter that constructive notification may be assumed and that the products could be exported. We need to prevent Third World bureaucratic foot-dragging and incompetence from adversely affecting our legitimate international trade endeavors.

In closing, S. 2227 should not be so broad as to include unregistered pesticides from export. As noted previously, there are numerous reasons why certain pesticides are not registered in the United States.

Second, CPDA supports EPA's efforts to intensify the information-sharing between countries with less sophisticated or no regulatory programs in place and harmonizing standards internationally through the Codex Alimentarius Commission.

Third, while the FDA and the USDA do have the tools necessary to remove foods from the market and exceed the maximum allowable residues, steps should be taken to obtain more resources for these programs. This could include added skilled positions and/or improving upon information-exchange between the import and exporting countries.

Fourth, instead of mandating a multilingual requirement on labels, consideration should be given to requiring some sort of pictorial identifying potential hazards.

Thank you for the opportunity to share our thoughts and comments with you.

---

## PREPARED STATEMENT OF THE NATIONAL AGRICHEMICAL RETAILERS ASSOCIATION, WASHINGTON, DC

We would like to thank you for giving the National AgriChemical Retailers Association (NARA) the opportunity to submit written comments on S. 2227, the "Pesticide Export Reform Act of 1990." NARA is the only independent national trade association representing crop protection chemical retailers. Our membership consist of 1,150 dealers who handle the majority of crop protection chemicals sold in the United States.

Even though pesticide retail dealers are "local" and not "global," our nation's pesticide export laws do effect our businesses. Changes are needed in these laws to make them more workable and effective. We see three specific areas that Congress needs to address in order to effectively and fairly manage our nation's pesticide exports. These areas include:

1. **Communication** of the current regulatory status of a U.S. produced pesticide before it can be shipped to another country.
2. **Monitoring** of pesticide residues on food and feeds imported into the United States with targeted monitoring of those items that violate tolerances or are believed to be treated with pesticides that are not registered or considered harmful to humans or the environment.
3. **Economic impact assessment of:**

(a) How increased export restrictions will effect the U.S. chemical manufacturing sector.

(b) How selling nonregistered or potentially dangerous chemicals to foreign competitors will effect U.S. farmers and the agricultural input sector.

### I. COMMUNICATION

Section 17 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) currently mandates two systems of pesticide export notification: a notice to the government of an importing country of the export of unregistered pesticides (section 17(a)(2)) and a notice to all countries of certain regulatory control actions taken by the EPA (section 17(b)). In addition, the statute (section 17 (d)) directs EPA to participate in international efforts in pesticide research and regulations. However, the effectiveness of current section 17 implementation has been called into question over the last few years.

Weighing the positive and negative impacts of implementing a more aggressive communication program brings one basic concern to mind. If the United States develops a pesticide regulatory communication program that will transfer additional information to importers of U.S. manufactured pesticides, will the importing country be able to process this information in order to achieve greater global food safety? Regrettably, a majority of the world's developing countries do not have internal systems in place (such as the EPA) to adequately process the increased amounts of pesticide data to be transferred to them by U.S. companies in order to comply with the language of S. 2227.

Because of the fact we just mentioned, our position is that Congress should lend additional technical and financial assistance to developing countries in order for them to establish effective pesticide regulatory programs that will help them understand and utilize the information they receive on pesticides. However, we firmly believe that these programs must be developed in concert with other nations before Congress restricts pesticide export sales.

We are not alone in the arena of international pesticide trade. Other countries with very limited environmental programs internationally market pesticides that compete with those produced in the United States. NARA supports the language in S. 2227 that calls for cooperation in international efforts to promote research and regulatory programs regarding pesticides. We also support current EPA efforts to bring U.S. activities into conformity with recently developed procedures concerning international notifications related to pesticides.

### II. MONITORING

Under the Federal Food, Drug, and Cosmetics Act (FFDCA) the EPA is responsible for setting tolerances (maximum permissible residue levels) for pesticides in or on food and feed crops. When these tolerances are set by the EPA, the U.S. Food and Drug Administration (FDA) is responsible for enforcing tolerances through surveillance and monitoring of all food and livestock feed crops.

To help address the present concern over U.S. pesticide exports and imported food and feed pesticide residue monitoring, we request that Congress take three steps:

First, Congress should mandate increased FDA efforts to monitor pesticide residues on food and feed coming into the United States. Even though FDA monitoring activities have been increased over the last few years, additional overall and targeted monitoring needs to take place.

Second, Congress should establish laws that increase penalties for shippers of food and feed products into the United States when these products contain illegal pesticide residues. Under current law, the FDA may invoke automatic detention of future shipments of food from a source that has been shipping commodities with illegal pesticide residues. While automatic detention is in effect, the importer is responsible for having each shipment of the commodity in question analyzed and certified by a private laboratory to be free of violative levels of the specific residue(s) in question.

NARA proposes that after the first violation takes place, Congress should mandate that products from the country of the export's origin be targeted for inspection more frequently and that the penalty for continued violations be either a fine, tariff, or a temporary ban on imports. We also request that the United States investigate the source of the pesticide that is causing the violation.

Third, if increased monitoring and enforcement of food and feed imports fails to show a decrease in detections of pesticide residues on food over a predetermined period of time, Congress must then look at restrictions on U.S. pesticide exports as well as international trade sanctions against other countries that are shipping pesticides which are violating our food safety laws. However, before Congress establishes such restrictions for U.S. chemical manufacturers, they must note that stopping sale of U.S. manufactured chemicals won't keep manufacturers in other nations from selling the same or even a less safe product unless we impose multilateral trade sanctions at the same time.

## III. ECONOMIC IMPACT

We cannot blindly enforce unworkable restrictions on our chemical manufacturers. U.S. crop protection chemical manufacturers annually export approximately 500 million pounds of active product worth over $2 billion. This is approximately 40 to 50 percent of U.S. production and is a significant component of the U.S. industry's business. Restricting these exports, without a thorough study of the impacts, could lead to the loss of thousands of jobs and the movement of manufacturing and research facilities outside of the United States.

S. 2227 calls for the EPA to ban sales of U.S. produced pesticides that are not registered for use here in the United States under FIFRA. This language is too restrictive. For example, manufacturers may not register a chemical in the United States because it was never intended to be used here. Manufacturers have spent millions in development of products that are designed to combat pests on crops grown all over the world and are approved in the country of use. Congress must carefully take into consideration the economic impact on the manufacturing sector should broad restrictions be placed on U.S. pesticide exports. Congress must also take into consideration the pesticide exports of other countries. Will these countries simply take over our export markets with pesticides that pose an even greater health hazard to humans and the environment?

Congress must also look at the domestic effects of our nation's export laws. We are concerned about U.S. manufacturers shipping pesticides that are suspended, canceled, or unregistered to other nations that are producing crops that compete with our own. However, Congress must carefully consider the domestic impacts of restricting the manufacturer market base for nonregistered pesticides and how, in the long run, these restrictions will impact the American farmer. Also, restrictions on the export of pesticide research material could seriously jeopardize the entire U.S. research base and the export of registered and safe pesticide products in the future. Experimental pesticide exports must not be restricted.

According to many U.S. manufacturer of pesticides, language in S. 2227 that unreasonably restricts pesticide exports will result in increased cost for crop protection chemicals in the United States while some farmers in other countries will still use and export food and feed to the United States that is produced with unsafe pesticides manufactured in other countries. Basically, the end result of S. 2227 as currently drafted will be the loss of manufacturing jobs in the United States, a loss in our U.S. research base, higher crop protection chemical costs for U.S. farmers and a negative effect on global food safety.

## IV. CONCLUSION

Congress must first weigh the risks and benefits of our pesticide export laws before they change them. S. 2227 will have dramatic negative effects on our nation's chemical manufacturing sector, agribusinesses, and our farmers.

Thank you for giving us the opportunity to submit these written comments on S. 2227. Should you have any questions, please feel free to contact us at the National AgriChemical Retailers Association.

**Consortium for International Crop Protection**
4321 Hartwick Road, Suite 404, College Park, Maryland 20740 USA
Telephone: (301) 454-5147 ☐ Cable: CONSORTICP
Telex: 5106013963 ☐ FAX: (301) 454-6676

March 28, 1990

Senator Patrick Leahy, Chairman
U.S. Senate Committee on Agriculture,
Nutrition and Forestry
328-A Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Leahy:

I am writing to you in support of the proposed amendment (S-2227) to the Federal Insecticide, Fungicide, and Rodenticide Act. The major effect of this amendment will be to deny the export of certain restricted use pesticides to countries where appropriate infrastructure and regulations for governing their use do not exist. While this amendment may create some difficulties for countries that have imported such pesticides in the past, primarily as a result of lower efficacy and greater cost of alternative pesticides, it is inconceivable that the U.S. should allow export to countries lacking comparable regulations to those required for their use in the U.S.

I might point out that the U.S. Agency for International Development rarely permits use of A.I.D. funds for the importation of restricted use pesticides, and in the few cases where this has happened in the past, it has only occurred after assurance of the ability to handle, distribute and utilize these products in a safe manner. In constructing dozens of environmental analyses for A.I.D. over the past decade, our Consortium has managed to suggest reasonable alternatives to restricted use pesticides in developing countries.

In conclusion, I can't see how our government can condone the use of pesticides in foreign countries without the same or similar safe guards that are required for use in the U.S.

Sincerely,

Allen L. Steinhauer
Executive Director

ALS:db

Member institutions: University of California, Cornell University, University of Florida, University of Hawaii, University of Illinois, University of Maryland, University of Miami, University of Minnesota, North Carolina State University, Oregon State University, University of Puerto Rico, Purdue University, Texas A & M University, United States Department of Agriculture

SPRIGGS & HOLLINGSWORTH
ATTORNEYS AND COUNSELORS
1350 I STREET, N.W.
NINTH FLOOR
WASHINGTON, D.C. 20005-3305

TELEPHONE:(202) 898-5800
TELECOPIER:(202) 682-1639
CABLE: SHWSH
TWX: 710-822-0121
WRITER'S DIRECT DIAL NO.
898-

March 27, 1990

Via Hand Delivery

Honorable Patrick Leahy
United States Senate
Committee on Agriculture, Nutrition
and Forestry
328A Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Leahy:

In response to your letter of March 20, 1990, I am writing to thank you for your invitation for a representative of Velsicol to testify on "The Pesticide Export Reform Act of 1990." As I stated to Mr. Jon Haber of the Committee Staff on March 23, 1990, Velsicol respectfully declines your kind offer. However, Velsicol has prepared the attached statement and attachments for the Committee. Velsicol would be very appreciative if this material is included in the Hearing Record.

Very truly yours,

Michael A. Nardolilli

Michael A. Nardolilli

MAN:kc

Attachments

**VELSICOL CHEMICAL CORPORATION**

5600 N. RIVER ROAD
ROSEMONT, ILLINOIS 60018-5119
(312) 698-9700
(708) 698-9700 as of 11/11/89

## STATEMENT OF VELSICOL CHEMICAL CORPORATION COMMENT ON AGRICULTURAL, NUTRITION AND FOREST COMMITTEE SENATE BILL 2227

### MARCH 26, 1990

Velsicol supports measures to help U.S. industry and government regulatory bodies in the effective regulation of pesticides worldwide. We support increased communication between U.S. and overseas regulatory bodies.

It has been our experience that foreign governments and their regulatory bodies understand our products' registration status in the U.S. and that they have carefully evaluated the scientific information available and the needs of their countries. In their decision making process, they have taken into consideration that pesticides behave differently in the tropics. Higher soil temperature and extremely moist and/or dry sandy soils, cause much more rapid degradation. Some products that control under moderate conditions, such as you find in the U.S., are ineffective in other climates, soils and for the control of differing species of pests.

Velsicol strongly supports proper labeling and use of pesticides in accordance with generally accepted application practices overseas. We believe our customers, who consist mainly of government agencies, large cooperatives, and professional pest control operators, understand how to apply the products safely and in accordance with their countries' regulations.

Here in the U.S., sources in the Department of Agriculture and FDA consistently report that levels of pesticide residues found on food imports do not constitute a health threat. Velsicol supports the proposition that FDA should be funded at the level deemed appropriate to insure their capabilities in effectively monitoring food imports.

It appears that in their comments regarding Velsicol's products, the sponsors of S.2227 have relied in large part on erroneous information included in a Greenpeace August, 1989 report that was grossly inaccurate. Our response to their mis-statements is attached.

Also attached are two statements prepared for Congressional hearings in June of 1987 which were authored by two highly respected scientists. They clearly indicate use of the products does not pose a human health threat.
In summary, we believe that:

> 1) Foreign regulators are best equipped to determine what is in their countries' best interests given climate, insects, soil, crop and economic conditions. Timely exchange of information on pesticide risks and benefits is important input to these determinations.
>
> 2) FDA inspection is the appropriate means to protect the U.S. public against the full range of concerns regarding food imports.

# THE FACTS ABOUT VELSICOL

**A Greenpeace document, "Greenpeace Action -- Facts About Velsicol" has been released to many members of the media in draft form, and provides the basis for a more detailed report on Velsicol Chemical Corporation. This document grossly mis-states the facts regarding Velsicol and the pesticides chlordane and heptachlor. The following information sheet addresses Greenpeace's "facts". The Velsicol statements are supported by widely accepted scientific information and EPA documents in the public domain.**

**FACT:** In August of 1987, Velsicol and EPA entered a "Memorandum of Understanding" whereby Velsicol maintained its domestic registrations for chlordane and heptachlor but voluntarily agreed to temporarily halt sales pending results from application tests.

**FACT:** The 1987 Agreement with EPA:

-did not "follow on the heels of a petition to emergency suspend both chlordane and heptachlor" because, as EPA has publicly stated, there is insufficient data to suspend the products;

-is typical of agreements EPA negotiates to avoid protracted and costly administrative proceedings when there is insufficient data to suspend;

-provides for the continued registration of both chlordane and heptachlor in the U.S.;

-provides that upon successful completion of EPA-defined air monitoring studies, Velsicol may resume domestic distribution and sale of chlordane and heptachlor for certain types of applications;

-is well within EPA's authority to negotiate and enter into, as recently confirmed by the U.S. Circuit Court of Appeals on February 3, 1989.

**FACT:** The February 3, 1989 U.S. Circuit Court of Appeals decision also accepted EPA's determination that there was insufficient scientific data to support the issuance of an emergency suspension order for chlordane and heptachlor.

**FACT:** When Velsicol has decided on a final program for conducting the studies EPA has requested, it will provide termiticide applications to homes that are used in the study, but Velsicol has not and will not ask any homeowner to sign away his/her right to sue in the event of a mishap.

**FACT:** The preliminary report on the carcinogenicity of chlordane and heptachlor written by EPA has not been reviewed by scientists outside the Agency. Such "peer review" is a process whereby members of the scientific community who are familiar with and expert on the scientific principles involved in the study, scrutinize the methodology and conclusions for accuracy and validity. Peer review is particularly important in the chlordane and heptachlor case since the EPA, despite overwhelming scientific evidence to the contrary, relied on one mouse study to make their conclusions. This study is viewed by many prominent scientists as flawed and inconclusive.

**FACT:** Velsicol does not condone any infraction of food tolerances. In three years, there have been two incidents of USDA reported infractions. In each case, the levels found were only marginally in excess of the allowable levels, demonstrating that chlordane and heptachlor are not players in Greenpeace's "circle of poison".

**FACT:** Greenpeace's reference to "lax" regulations suggests that it believes regulators from other countries are so backward and ignorant that they must be led to environmental security by Greenpeace. In fact, regulators from other countries have the same information EPA has. Regulators from these countries know better than the U.S. EPA what their country's needs are and what differences exist (climatic, insect infestations, housing, etc.) between their country and the U.S. Not surprisingly, when foreign regulatory opinions differ from those of Greenpeace, Greenpeace immediately deems the foreign process "lax" and brands the foreign reviewers unqualified.

**FACT:** Velsicol has taken a lead role in the industry for reducing emissions from its facilities, going beyond even President Bush's proposed clean air legislation. Velsicol is committed to a 90% reduction in toxic air emissions by 1994.

**FACT:** Velsicol is involved in the cleanup of three superfund sites and Velsicol accepts responsibility for the remediation of these sites which, as Greenpeace knows, are the result of legal and permitted disposal practices in the past.

**FACT:** The North Treatment Works in Memphis is a state-of-the-art sewer treatment plant, technologically designed to handle the waste discharged by Velsicol as well as many other industrial plants in Memphis. The operators of the North Treatment Works know exactly what wastes are being sent to them and how much. Each waste has been characterized and a permit issued for its discharge.

**FACT:** Velsicol does discharge permitted emissions into the air from the Memphis plant. These emissions are well within the limits set for the plant's permit issued by the Memphis Department of Health. Despite the fact that these emissions are legal and acceptable, Velsicol is committed to a 90% reduction of the emissions reported for 1987. Substantial progress has been made towards this goal at the Memphis plant with a 50% reduction of toxic emissions between 1987 and 1988.

**FACT:** Legal termiticide use does not result in contamination of rivers and fish, as Greenpeace claims. Once chlordane or heptachlor are applied to the soil next to a structure for termite control, the chemicals bind to the soil particles and do not move. There is no data that shows "legal" applications pollute.

**The chlordane and heptachlor issue is a complex one that requires careful analysis of all the facts. Greenpeace's "facts" are merely simplistic statements which are not substantiated by the volumes of scientific research and review that have been conducted on the products over the last 40 years. Greenpeace's "facts" reflect neither U.S. domestic policy nor international need. Velsicol plays no role in the Greenpeace "circle of poison"; Velsicol contributes instead to the cycle of food production, property and crop protection.**

# STATEMENT ON HAZARD ASSESSMENT OF CHLORDANE

By: Gary M. Williams, M.D.
8 Elm Road
Scarsdale, New York 10583

June 23, 1987

In 1976, Epstein (1) reported a previously unpublished study which was carried out in 1973 by the International Research and Development Corporation. The study involved male and female Charles River CD-1 mice, which were fed technical grade chlordane. The initial interpretation of the study was that no carcinogenicity was demonstrated, but a reevaluation of the histology allegedly revealed a significant incidence of hepatocellular carcinomas in both males and females given 25 or 50 mg/kg diet.

In 1977, the National Cancer Institute (2) reported on the bioassay of analytical grade chlordane in B6C3F1 hybrid mice and Osborne-Mendel rats. In the mice, the Institute reported an increased incidence of hepatocellular carcinomas in groups given a time-weighted average diet concentration of 30 and 56 mg/kg diet for males and 30 and 64 mg/kg diet for females. In rats, which received up to 407 mg/kg diet in males and 241 mg/kg diet for females, the Institute reported, but did not consider to be compound-related, an excess of follicular cell thyroid neoplasms in both sexes and of fibrous histiocytomas in males.

A bioassay in rats was performed at the Research Institute for Animal Science in Biochemistry and Toxicology in Japan. In this study (3), benign liver tumors were reported in 8/40 male rats fed 25 ppm chlordane for 105-130 weeks. This minimal finding in an unusual study, i.e. one lasting 130 weeks rather than the conventional 104 weeks, must be interpreted with caution. Moreover, the findings in the study itself are open to question. To begin with, none of the tumors was evident grossly. The microscopic liver tumors found in the study were reviewed by me in 1984 and my diagnoses differed somewhat from those of the study laboratory. In addition, I found two neoplasms in a control animal, not detected by the study pathologists. Since only two sections were taken per liver and all lesions were microscopic, I raised the question whether the findings might not represent a sampling artifact. This still needs to be resolved, especially since there are no historical control data for F344 rats at 130 weeks, especially such rats in Japan.

The carcinogenicity data on chlordane have been reviewed on three occasions by the International Agency for Research on Cancer, World Health Organization. I have been a member of the last two working groups. In 1979 (4), a working group concluded that there was sufficient evidence that chlordane was carcinogenic in mice, but drew no conclusions concerning the rat studies. In 1982 (5), the overall evidence for experimental animal carcinogenicity was considered to be limited. A working group met again in March, 1987, but the report is not yet available.

With accumulating research on the mechanisms of induction of tumors in experimental animals, it has become clear that not all "chemical carcinogens" act in the same manner (6). One major difference between types of carcinogens is that some form chemically reactive moieties that attack the genetic material (DNA) in target cells, whereas others lack this property. Examples of these two types of agents, respectively, are the polycyclic aromatic hydrocarbons that are formed in tobacco smoke, on the one hand, and the artificial sweetener, saccharin, on the other. The genotoxic carcinogens differ in many other characteristics from epigenetic agents. Most carcinogens that have been known to cause cancer in humans are of the genotoxic type (7), not of the type to which chlordane belongs. Therefore, I have suggested that the approaches to hazard assessment should be different for these two types of agents (7).

In my laboratory at the American Health Foundation, I have conducted a series of experiments to examine the mechanism of action of chlordane. In a number of studies, I found no evidence for a genotoxic action of chlordane (8,9). This supports the conclusion of the IARC Working Group that the evidence for activity of chlordane in short-term tests was inadequate (5). Moreover, in cultured cells a specific effect of chlordane on rodent liver cell membranes was demonstrated (10), which could be the basis for the increase of liver tumors in mice genetically prone to such tumors when fed amounts sufficient to cause liver injury. In a study designed to identify an epigenetic mechanism for the induction of liver tumors in mice (11), I found that chlordane produced a promoting effect in mouse liver carcinogenesis. This is the same kind of effect produced by the widely used ant-seizure drug, phenobarbital, and the commonly used antioxidant food additive, butylated hydroxytoluene or BHT. This effect would account for the increase in liver tumors in mice and in rats fed large amounts of chlordane, if the latter finding is confirmed.

These observations indicate that chlordane is like many other chemicals that can increase the number of tumors in rodents, but to which humans have been exposed, often in substantial amounts, without evidence of carcinogenicity. In fact, the IARC has repeatedly found the evidence for carcinogenicity of chlordane to humans to be inadequate (4,5).

In consideration of all the evidence, it is my view that chlordane, although it can increase the number of liver tumors in experimental rodents at sufficiently high chronic doses to cause liver injury, is not a carcinogenic hazard to humans (12).

## Statement of Sidney Shindell, M.D.
## on the
## Health Effects of Exposure to Chlordane

My name is Sidney Shindell. I am professor and chairman of the Department of Preventive Medicine at the Medical College of Wisconsin, a position I will have held for 21 years come July 1, 1987.

I am here because I have studied the health of the workers who have made chlordane since it was first formulated in 1946. I did my first study of this group almost ten years ago and have since repeated the study twice. The report of the most recent update of this study appeared in the Journal of Occupational Medicine just about a year ago, and I attach a copy of this report to my statement.

In doing these studies I have reviewed the other studies that have been done of either exposed chemical workers or pest control applicators. An outline of the sum total of eighteen such studies are also attached to this statement.

I have also reviewed the air force housing studies and have discussed the animal studies with scientists knowledgeable about the details of such studies.

The facts as I discern them are:

(1) IARC considers the evidence in mice "limited", and a number of authorities in veterinary pathology feel that the findings of the mouse studies "did not meet the requirements to be classified as sufficient evidence of carcinogenicity." (S.D. Vesselinovitch, D.V.M. SC.D., Professor of Pathology, University of Chicago.)

(2) If one examines all the evidence from human studies in their totality and applies the principles of AB Hill on Association and Causation, (reprinted in the last 2 editions of Maxey-Rosenau) the mass of epidemiologic data warrants the conclusion that we really have no evidence of carcinogenicity of chlordane in any group of people with significant exposure.

(3) The air force housing studies dealt with the amount of chlordane detectable in treated houses, depending on housing design and showed that the vast majority had less than 5 micrograms per cubic meter of air. In none of these studies were any adverse health effects examined or reported.

(4) Chlordane has been used in some 30 million homes in the U.S. since its introduction in the late 1940's. These homes would be expected to have included almost 100

million people or 40% of the U.S. population. Were there to have been a public health hazard, it certainly would have been reflected in our overall mortality and morbidity data. What we can report is that in this same period, other than cancers due to smoking, radiation and a handful of occupational chemicals like asbestos and vinyl chloride, we can see no cancer increase. In fact our society is healthier and living longer than ever before in history.

(5) The most common alternative proposed for the stable compound which has no demonstrated toxicity to humans at the low doses normally encountered is one which causes a demonstrable change in the enzyme related to neuro-muscular transmission. This known physiological aberration has not been studies sufficiently in my view to warrant widespread use of such a chemical in preference to one shown by 40 years of use not to be accompanied by any discernable adverse health effects when properly handled and applied.

Why chlordane is now being singled out for attack at this point in time is a mystery to me. Much of what I read is either misinterpretation or misrepresentation of the available scientific data. I believe we shall be doing an injustice to science and to the public to remove this chemical from its essential use. I would hope this committee would view the available data objectively and reject the bill that proposes effectively to ban the use of this substance.

Thank you for your attention.

6/24/87

## STUDIES OF WORKERS - I

| Author/Pub. | Date | Subjects | Findings | Remarks |
|---|---|---|---|---|
| Princi & Spurbeck<br>AMA Arch Ind Hyg & Occup Med. | 1951 | Workers making chlordane, aldrin & dieldrin (1-3 yrs)<br>N = 34 | No adverse effects on •nervous system<br>•liver<br>•kidneys<br>•blood | "will not produce harmful effects... under ordinary conditions of use" |
| Alvarez & Hyman<br>AMA Arch Ind Hyg & Occup Med. | 1953 | Workers in different plant making chlordane (up to 5 yrs)<br>N = 24 | No abnormality in<br>•liver<br>•kidneys<br>•skin<br>•nervous system<br>•blood | Confirms previous findings. "Innocous" when breathed or in contact with skin. |
| Fishbein et al<br>Ind Med & Surg. | 1964 | Workers making or packaging chlordane. (1-5 yrs)<br>N = 15 | No evidence of injury to any of the organic systems | "Little, if any, hazard from the use of chlordane when properly employed." |
| HEP (Health Eval. Programs)<br>Reported to EPA | 1975 | Workers making chlordane and heptachlor. Test group of 50 from each plant. | No evidence of special health hazard at either plant. | Blood pesticide levels in workers reported. |
| Shindell<br>Reported to EPA | 1977 | Workers at plants making chlordane and heptachlor.<br>N = 712 and 1074 | More favorable mortality experience than general pop'n both plants. | No excess of mortality from cancer either plant. |
| Wang & MacMahon<br>J Occup Med | 1979 | Workers at Marshall & Memphis plants making chlordane & heptachlor<br>N = 1403 | More favorable mortality experience than general pop'n both plants. | No excess of cancer even among people followed 20 and more years. |

## STUDIES OF WORKERS - II

| Author/Pub. | Date | Subjects | Findings | Remarks |
|---|---|---|---|---|
| Shindell et al. Report to Am Chemical Society | 1980 | Update of study of workers at Marshall making chlordane (34 years) N = 783 | More favorable mortality experience overall & from cancer. Morbidity also as expected. | "No evidence of any long-term... effect on health..." |
| Ditraglia et al. (NIOSH) Scand J Work Envir Health | 1981 | Workers at four plants making pesticides. Marshall and Memphis plants included. N = 632/2141 | More favorable mortality experience, all four plants. | "...study has not identified a specific risk associated with employment..." |
| Shindell et al. Report to company | 1981 | Update of study of workers at Memphis plant (28 yrs) N = 1,115 | More favorable mortality experience overall and from cancer compared to gen'l pop'n. | No change in risk of death by length of employment. |
| Shindell Report to company | 1983 | Workers with minimum of 5 years in heptachlor production 1952-1982. N = 93 | Data fail to show any unusual health risk. | "Chronic exposure ...in the work environment is not accompanied by any unusual risk of illness or death." |
| Shindell Report to company | 1984 | Workers with minimum of 10 years in chlordane production average 26.6 yrs N = 56 | No relationship between blood levels of oxychlor or hep epox and any medical condition present. | "Additional corroborative evidence that chronic exposure...not accompanied by any unusual risk..." |
| Shindell & Ulrich Report to company<br>Publication JOM | 1985<br>1986 | Five Year update of 1980 study of workers at Marshall plant (39 yrs) N = 800 | Overall and cancer mortality more favorable than U.S. pop'n. | No relationship between cancer death & length of employment. |

STUDIES OF APPLICATORS

| Author/Pub. | Date | Subjects | Findings | Remarks |
|---|---|---|---|---|
| Wang & MacMahon<br>Publication JOM | 1979 | Males employed nationwide by 3 pest-control companies. N = 16,126 | More favorable mortality experience than gen'l population | No excess of cancer among termite control applicators |
| Morgan et al.<br>Arch Env Contam Toxicol | 1980 | Workers occupationally exposed to pesticides (from EPA file)<br>N = 2,620 vs. 1,049 controls. | "Mortalities from cancer and arteriosclerosis were not detectably different from ...controls" | "Nor were there frequent reports of nervous system diseases...or other chronic diseases." |
| Shindell<br>Report to company | 1981 | Pest-control operators attending convention in Houston in 1975. N = 555 | Over 90% had heptachlor and 67-78% had oxychlordane in blood | No correlation between amount of chemicals in blood and usual lab tests |
| MacMahon<br>Report to company | 1982 | Five year update of prior study with up to 15 yrs exposure.<br>N = 16,126 | Overall mortality and and deaths from cancer more favorable than gen'l population | Termite control workers more favorable than other applicators. |
| Blair et al.<br>(NCI)<br>J of NCI | 1983 | Florida pesticide applicators licensed 1965-66. Status as of 1/1/1977 determined. N = 3,827 | Mortality consistent with gen'l pop'n except lung cancer.<br>•higher in "unexposed"<br>•higher in "gen'l household pests" | "Not possible to attribute excess risk...to specific pesticides" "need for further research" |
| Stubbs et al.<br>Am J Indus Med | 1984 | California agricultural workers deaths, 1978-79<br>N = 14,908 | Fewer deaths from cancers than expected. Fewer lung cancer deaths among males | Prior study (1959-61) also showed fewer cancer deaths than expected |

# Mortality of Workers Employed in the Manufacture of Chlordane: An Update

Sidney Shindell, MD, LLB, and Slack Ulrich, BSChE

*A prospective mortality study was conducted of the 800 employees who worked 3 months or more during the period January 1946 through June 1985, in the only plant in the US where the termiticide chlordane has been produced. The study covers the entire period of chlordane production to date and includes 7,347 person-years of employment at the chlordane plant and 21,585.5 person-years of follow-up since commencement of employment. All but three former employees considered to be alive at the end of the study period were either contacted directly or were identified as alive by a variety of reliable sources. Death certificates were obtained for 161 of the 181 decedents and reliable causes of death were reported for an additional 11 cases.*

*Overall death rate was slightly less than expected but not to the level of statistical significance. Production workers with higher pesticide blood levels had lower standardized mortality ratios for cancer than nonproduction employees, and there appears to be an inverse relationship of cancer mortality to length of employment. An unexplained excess of cerebrovascular deaths was observed, offset by a lesser degree of cardiovascular deaths.*

Concern over whether chlorinated hydrocarbon insecticides pose any hazard to the health of either workers who make these chemicals or persons who apply them has prompted a series of studies of such workers extending over more than 30 years. Starting with Princi and Spurbeck in 1951[1] and ending with Blair et al[11] in 1983, the steady stream of studies either have shown no discernable health effect[1-10] or show a cancer experience explainable by factors other than workplace exposure.[11]

The Marshall plant of the Velsicol Chemical Company, where chlordane is manufactured, has been the subject of study by four different investigators over the years, and consistent findings of lack of evidence of adverse effects on health have been reported.[2,4,6,8,9] Concomitant studies of pest control operators have yielded similar results.[3,5,7,10]

Because of the hypotheses that either an extensive period of exposure might be required to produce an adverse effect or that there might be an extensive latent period between exposure and ultimate appearance of disease, it has become customary to repeat or update prior studies at appropriate intervals. This report is concerned with the third study conducted by this investigator of the workers employed at the Marshall plant of the Velsicol Chemical Corporation.

The first study was conducted from 1976 to 1977 and the findings were reported to the Environmental Protection Agency in June 1977.[4] The second iteration was performed from 1979 to 1980 and reported to the Division of Environmental Chemistry of the American Chemical Society in August 1980.[8] The current study was begun in June 1985.

## Study Design

The purpose of this study is, as was the case in the previous iterations, to determine the mortality experience of all persons who completed a minimum of 3 months of employment at the plant where chlordane has been manufactured from the time production was begun in January 1946 through June 30, 1985.

In prior iterations, concern over any product handled in the plant resulted in analyzing the experience covering the period of employment from the actual date an employee might have worked at Marshall, many having had considerable prior experience before chlordane was introduced. In this iteration, only that period of employment during which chlordane was present in the plant has been used for analysis and any employment prior to

---

From the Department of Preventive Medicine, Medical College of Wisconsin, PO Box 26509, Milwaukee, WI 53226 (Dr Shindell); and Ergotopology, Inc, Milwaukee (Mr Ulrich). (Address correspondence to Dr Shindell.)

0096-1736/86/2807-497$02.00/0

Copyright © by American Occupational Medical Association

Jan 1, 1946 is not considered. There were in fact 194 employees present at the plant when chlordane was introduced, but for the purpose of this study they are dealt with as if they were newly employed as of the date the study period commenced.

Employees were separted into subgroups based on their principal duties within the plant during their total period of employment and, for the purpose of this summary report, the detailed subclassifications are grouped as production and nonproduction employees only. Production employees include operators, laborers, and those in shipping and handling. Nonproduction employees include maintenance, laboratory, and engineering personnel and those in management and clerical activities. Since blood pesticide levels had been determined for most of the then current employees in both 1976 and 1979, averages were derived to reflect the degree of exposure for employees in each of the job categories we had defined.

The methods used to contact former employees included the traditional approaches of searching company records, conferring with current employees and former employees still residing in the local communities, contacting relatives and personal references, inquiring of school alumni groups and professional associations, and contacting former neighbors and identified acquaintances. For those not located by the above means, the Social Security Administration personnel searched their files and, for those workers who had died, reported date and place of death. For others, the SSA is authorized at this moment only to indicate that the worker is identified in their files. The status of three workers in the cohort as of June 30, 1985 could not be determined after exhausting all tracing methods outlined above.

## Study Universe

Table 1 shows the study cohort grouped according to primary job category, and by sex, race and follow-up status as of June 30, 1985.

Of the 181 workers reported as deceased, death certificates had been obtained for 161 workers at the time of completion of the initial study report. In an additional 11 cases, an apparently reliable informant provided information as to cause, and these were treated as if this were the confirmed cause of death in the analyses performed.

## Analytic Technique

In order to analyze the mortality experience of the Marshall employees, it is necessary to compare the observed mortality in the employee groups with that of the comparable segments of the United States population over the same period of time. To perform these comparisons, the probability of each employee dying from specific causes during the period of the study was calculated using the method previously reported.[9] The advantages of using this method of analysis are described by the authors of the analytical program.[12]

US death rates are used for two reasons. Primarily we are faced with the problem that detailed death rates by cause for 5-year age intervals and for 5-year time periods since 1946 are not available for the local area of primary concern. Second, while employment was solely at Marshall, both residence and place of death might be elsewhere.

Marshall is located in Clark County, Illinois, a short distance from Terre Haute, Indiana (Vigo County), and an appreciable number of employees live in this area. Of the 181 decedents in the study, 86 (47.5%) were residents of Illinois at time of death, 59 (32.6%) were residents of Indiana, and 34 (18.8%) resided elsewhere. In two instances, the place of death is thus far not known.

In examining death rates for this region of the country, US rates are quite comparable. In both the 1969 and 1985 editions of *Statistical Abstracts of the United States*, the rates for the two states for principal causes tend to bracket the US rates[13]; in examining cancer experience specifically, whereas Marshall's county tends to be below the national rates in the 1970s, Terre Haute's rate is above the average.[14] With the place of residence for former Marshall employees who died of cancer almost equally distributed between Illinois and Indiana (45.9% and 40.5%, respectively), the US rates appear to be the most suitable that can be used and are presumed to reflect the experience expected in the geographic area of concern.

The analysis includes 7,347.0 person-years of employ-

TABLE 1

Study Universe as of June 30, 1985, by Sex, Race, Employment and Contact Status and by Job Classification for White Males

| Employee Group | Total | Current Employees (June 30, 1985) | Former Employees Alive | | | Deceased | | Status Unknown |
|---|---|---|---|---|---|---|---|---|
| | | | Direct Contacts | Indirect Contacts | Identified by SSA* | DC Obtained | No DC Obtained | |
| White males† | 706 | 79 | 150 | 240 | 58 | 156 | 20 | 3 |
| Production | 397 | 40 | 93 | 149 | 22 | 79 | 12 | 2 |
| Nonproduction | 309 | 39 | 57 | 91 | 36 | 77 | 8 | 1 |
| Black males | 7 | 0 | 2 | 3 | 2 | 0 | 0 | 0 |
| Females | 87 | 7 | 37 | 30 | 8 | 5 | 0 | 0 |
| All employees | 800 | 86 | 189 | 273 | 68 | 161 | 20 | 3 |

* Abbreviations used are: SSA, Social Security Administration; DC, death certificate.

† Includes two Asians and one employee of Hispanic origin.

ment at Velsicol since Jan 1, 1946 and 21,585.5 person-years of survival since commencement of such employment.

## Mortality Analysis

Displayed on Table 2 are the results of the mortality analyses by principal cause of death and by race and sex.

Overall, production employees had a more favorable mortality experience than nonproduction employees. This was due to lower standard mortality ratios (SMRs) for both heart disease and cancer, and for "other and unknown" causes. They did experience a slightly greater rate of deaths from stroke and an excess from trauma as well. None of the differences was, however, statistically significant.

Fig 1 shows graphically the relative experience of the entire white male cohort compared with that of the US and shows a more favorable experience from approximately 45 years of age through 80 years of age.

## Cerebrovascular Deaths

There were 20 deaths attributed to stroke or cerebrovascular accident among the 176 deaths recorded for the white males in this study cohort. On the basis of US mortality rates during the time period covered by the study, 11.7 such deaths were expected to occur in a group of persons of this size and age composition. There were no such deaths recorded for the black males, and the one female included in this category died from a subarachnoid hemorrahge, not a stroke.

For the 20 white males whose deaths were attributed to stroke, two employee subgroups showed statistically significant excess, ie, those involved in shipping and those working in the laboratory. One of these groups (shipping) had relatively high levels of pesticide metabolites in their blood, the other (laboratory) had relatively low levels.

Generally, the employees who died of stroke were among those hired prior to the introduction of chlordane, spent a relatively brief period at the Marshall plant following the introduction of this chemical and had an extensive period between termination of employment at Marshall and their eventual deaths. Half of the group were more than 70 years of age at time of death and three died after their 80th birthday.

The risk factors for stroke are generally considered to be the same as the risk factors for heart disease, yet this same work force, showing an apparent excess of stroke, experienced fewer deaths than expected attributed to cardiovascular disease. In combination, these are at the level expected.

## Cancer Mortality

Mortality from cancer of all types was slightly but not significantly below what was expected compared with that of the US experience in production employees, and at the expected level in nonproduction employees.

The most common site of cancer, as expected, was cancer of the lung. These accounted for about one third of the total cancers, a proportion that is consistent with that generally found in the US male population.[15] The SMR for cancer of the lung was 0.86.

The remaining cancers represented 13 different types, nine of which accounted for one case each. There were four colorectal cancers, three stomach, two pancreas and two renal. In five instances, the primary site could not be identified on the basis of the information available. The SMR for nonrespiratory cancers was 0.98.

Because a question was raised by the Committee on Toxicology of the National Research Council in 1982[16] regarding "the suggestion of a trend . . . with increasing length of employment" in our 1980 report, a more detailed analysis has been performed. Fig 2 shows the

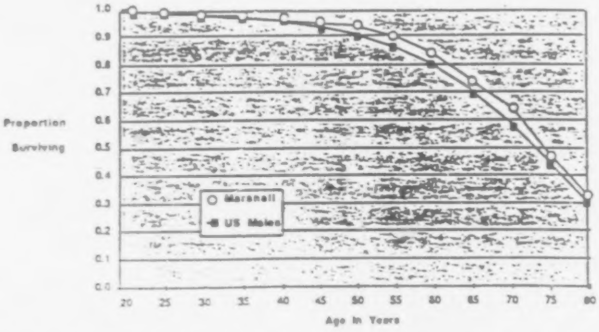


Fig 1. Proportion of white male employees of the Marshall, Illinois, plant of the Velsicol Chemical Corporation surviving at specific ages when those dying from all causes are deducted, compared with the white male US population at large during the study period (January 1946 to June 1985).

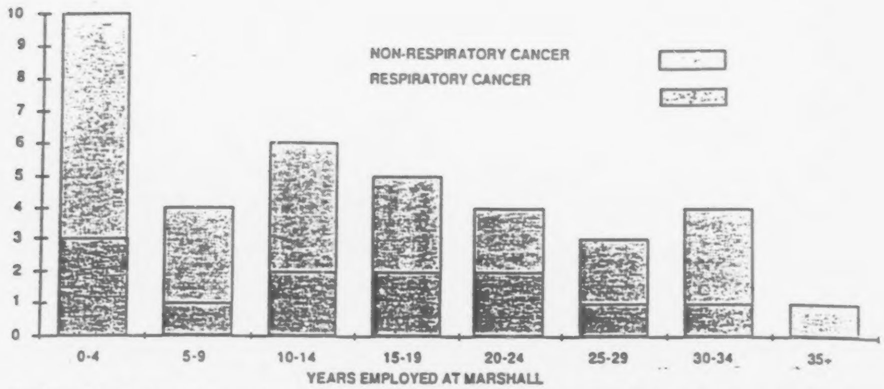


Fig 2. Cancer deaths among former employees, 1946 to 1985, Velsicol Chemical Corporation, Marshall, Illinois, plant, by length of employment at Marshall.

TABLE 2
Deaths Among Former Employees: Jan 1, 1946 to June 30, 1985 Compared With Those in US Population: by Cause and Job Classification*

| Employee Group | All Causes (all ICD) | | | Heart Disease (390–429, 440–448) | | | Cancer (140–209) | | | Stroke (430–438) | | | Trauma (E800–E999) | | | Other and Unknown (All other ICD) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velsicol | US | SMR† | Velsicol | US | SMR | Velsicol | US | SMR | Velsicol | US | SMR | Velsicol | US | SMR | Velsicol | US | SMR |
| White males | 176 | 191.7 | 0.92 | 76 | 84.2 | 0.90 | 37 | 40.6 | 0.91 | 20‡ | 11.7 | 1.71 | 17 | 18.8 | 0.90 | 26 | 36.3 | 0.72 |
| Production | 91 | 103.0 | 0.88 | 35 | 44.9 | 0.78 | 17 | 21.6 | 0.79 | 11 | 6.3 | 1.75 | 13 | 10.6 | 1.23 | 15 | 19.5 | 0.77 |
| Nonproduction | 85 | 88.7 | 0.95 | 41 | 39.3 | 1.04 | 20 | 19.0 | 1.05 | 9 | 5.4 | 1.67 | 4 | 8.2 | 0.49 | 11 | 16.8 | 0.65 |
| Black males | 0 | 0.2 | | 0 | 0.0 | | 0 | 0.0 | | 0 | 0.0 | | 0 | 0.1 | | 0 | 0.0 | |
| Females | 5 | 4.9 | 1.02 | 0 | 1.1 | | 0 | 1.7 | | 1 | 0.3 | | 1 | 0.6 | | 3 | 1.1 | 2.73 |
| All employees | 181 | 196.8 | 0.92 | 76 | 85.3 | 0.89 | 37 | 42.3 | 0.87 | 21 | 12.0 | 1.75 | 18 | 18.5 | 0.97 | 29 | 37.4 | 0.78 |

*Abbreviations used are: ICD, International Classification of Diseases; SMR, standardized mortality ratio.

$† \text{SMR} = \frac{\text{No. Velsicol deaths}}{\text{No. US deaths}}$ (not calculated if observed value = 0 or 1).

‡ Statistically significant ($P < .01$).

TABLE 3
Average Blood Pesticide Levels of Marshall Employees by Job Class, 1976 and 1979

| Job Class | OXY 76* | OXY 79 | HE 76 | HE 79 |
|---|---|---|---|---|
| Production employees | 0.61 (62) | 2.29 (40) | 0.87 (70) | 3.05 (42) |
| Nonproduction employees | 0.42 (47) | 1.13 (54) | 0.65 (61) | 1.62 (59) |

*Measurement values: Oxy 76 = 1976 oxychlordane in parts per billion; Oxy 79 = 1979 oxychlordane in parts per billion; HE 76 = 1976 heptachlor epoxide in parts per billion; HE 79 = 1979 heptachlor expoxide in parts per billion. (Number of individual samples represented are shown in parentheses.)

distribution of both lung cancer and all other forms of cancer for 5-year intervals of length of employment. As is evident there is generally an inverse relationship between cancer mortality and length of employment for cancers overall, with essentially a straight line relationship in the case of lung cancer. This finding is consistent with the observation shown in Table 2 above that the production personnel, with blood pesticide residues (Table 3) higher in both 1976 and 1979 than the nonproduction personnel, had a lower rate of cancer deaths.

## Morbidity of Study Cohort

Although the 1980 report contained a morbidity analysis, one was not repeated during this present iteration. The prior report dealt with the health status of both current and former employees as of the date of follow-up and showed no unusual patterns of illness.

Subsequent to that report an investigation was conducted of the health status of all employees at Marshall with more than 10 years of employment. Because this

II

101ST CONGRESS
2D SESSION

# S. 2227

To amend the Federal Insecticide, Fungicide, and Rodenticide Act to reform the provisions of such Act governing exported pesticides, and for other purposes.

---

## IN THE SENATE OF THE UNITED STATES

MARCH 1 (legislative day, JANUARY 23), 1990

Mr. LEAHY (for himself, Mr. GORE, and Mr. FOWLER) introduced the following bill; which was read twice and referred to the Committee on Agriculture, Nutrition, and Forestry

---

# A BILL

To amend the Federal Insecticide, Fungicide, and Rodenticide Act to reform the provisions of such Act governing exported pesticides, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

### SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Pesticide Export Reform Act of 1990".

(b) TABLE OF CONTENTS.—The table of contents is as follows:

Sec. 1. Short title; table of contents.

TITLE I—EXPORTED PESTICIDES

Sec. 101. Definitions.

Sec. 102. Registration of establishments.
Sec. 103. Protection of trade secrets and other information.
Sec. 104. Unlawful acts.
Sec. 105. Imports and exports.
Sec. 106. Conforming amendments to table of contents.

TITLE II—TOLERANCES FOR AGRICULTURAL COMMODITIES

Sec. 201. Tolerances for agricultural commodities.
Sec. 202. Tolerances.
Sec. 203. Imports and exports.

TITLE III—EFFECTIVE DATES

Sec. 301. Effective dates.

# TITLE I—EXPORTED PESTICIDES

## SEC. 101. DEFINITIONS.

(a) IN GENERAL.—Section 2 of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136) is amended by adding at the end the following new subsections:

"(hh) COUNTRY OF USE.—The term 'country of use' means any foreign country in which a pesticide, device, or active ingredient—

"(1) is used;

"(2) is intended to be used or formulated; or

"(3) on the basis of substantial evidence, the use of such pesticide, device, or ingredient is probable.

"(ii) EXPORTER.—The term 'exporter' means any person who arranges to transport, or who transports, any pesticide, device, or active ingredient to any country other than the United States, or any territory or possession of the United States.".

(b) MISBRANDED.—Section 2(q)(1) of such Act (7 U.S.C. 136(q)(1)) is amended by striking subparagraph (H) and inserting the following new subparagraph:

"(H) in the case of a pesticide intended for export from the United States, the label does not meet the requirements of section 17(a)(6).".

### SEC. 102. REGISTRATION OF ESTABLISHMENTS.

Paragraph (1) of section 7(c) of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136e(c)(1)) is amended to read as follows:

"(1)(A) Any producer operating an establishment registered under this section shall inform the Administrator within 30 days after the establishment is registered of the types and quantities of pesticides and active ingredients used in producing pesticides that the producer—

"(i) is currently producing;

"(ii) has produced in the past 360-day period; and

"(iii) has sold or distributed during the past 360-day period.

"(B) Any producer operating an establishment registered under this section shall inform the Administrator within 30 days after the establishment is registered of—

"(i) the types and quantities of pesticides, and active ingredients used in producing pesticides for export to a foreign country; and

"(ii) the date of export and quantity of pesticides and active ingredients exported to each foreign country to which the producer has exported during the past 360-day period.

The information required by this paragraph shall be kept current and submitted to the Administrator annually as required under such regulations as the Administrator may prescribe.".

### SEC. 103. PROTECTION OF TRADE SECRETS AND OTHER INFORMATION.

Section 10(d) of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136h(d)) is amended by adding at the end the following new paragraph:

"(4) Notwithstanding any other provision of this Act, the information submitted by an exporter under sections 17(a)(5)(C), 7(a)(7)(C) and 7(c)(1)(B)(ii) shall not be entitled to confidential treatment under subsection (b).".

### SEC. 104. UNLAWFUL ACTS.

Section 12(a)(2) of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136j(a)(2)) is amended—

(1) by striking "or" at the end of subparagraph (R);

(2) by striking the period at the end of subparagraph (S) and inserting "; or"; and

(3) by adding at the end the following new subparagraph:

"(T) to knowingly or recklessly export a pesticide, device, or active ingredient in violation of section 17.".

### SEC. 105. IMPORTS AND EXPORTS.

Section 17 of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136o) is amended to read as follows:

### "SEC. 17. IMPORTS AND EXPORTS.

"(a) PESTICIDES AND DEVICES INTENDED FOR EXPORT.—

"(1) IN GENERAL.—Notwithstanding any other provision of this Act, no pesticide, device, or active ingredient may be exported to a foreign country unless—

"(A) such pesticide, device, or active ingredient is prepared and packaged according to the specifications of the foreign purchaser and the legal requirements of the country of use; and

"(B) the producers and exporters of any such pesticide, device, or active ingredient meets the requirements of paragraphs (1), (2), (5), and (6) of this subsection and sections 2(p), 2(q), 7, and 8.

"(2) EXPORT OF PESTICIDES.—

(A) No person shall export to any country of use a pesticide—

"(i) that is not registered with the Administrator under section 3; or

"(ii) for use in connection with agricultural production related to food use, as defined by the Administrator, if such pesticide is not registered for use in connection with agricultural production related to food use under section 3.

"(B) The Administrator shall determine that the requirements of subparagraph (A)(ii) have not been met if there is substantial evidence that—

"(i) on the basis of the advertising, promotion, packaging, distribution, labeling of a pesticide, or other circumstance that the Administrator determines to be related to the export of such pesticide, it is probable that such pesticide may be used in connection with agricultural production related to food use, and such pesticide is not registered for such use under section 3;

"(ii) patterns of pesticide use in a country of use indicate that it is probable that such pesticide may be used in connection with agricultural production related to food use, and such pesticide is not registered for such use under section 3;

"(iii) at the time of such determination, such pesticide is in use in connection with agricultural production related to food use, for which such pesticide is not registered for use under section 3; or

"(iv) the quantity of such pesticide that such person intends to export exceeds the quantity that the Administrator determines, on the basis of expectations of use, could be used in the country of use for use other than in connection with agricultural production related to food use.

"(3) TEMPORARY WAIVER FOR THE CONTROL OF COMMUNICABLE DISEASE.—The Administrator may issue a temporary waiver from any requirement under paragraph (1)(B), (2), or (5) to permit the export to a country of use of a pesticide that does not otherwise meet the requirements for export under paragraph (1)(B), (2), or (5) to prevent the imminent spread or to arrest the spread of a communicable disease of humans that poses a serious threat to public health in such country of use, if—

"(A) the Administrator makes a determination that—

"(i) the pesticide is to be used on a temporary basis, as defined in regulations prescribed by the Administrator, for a period of time that shall not exceed 120 days;

"(ii) there is no practicable chemical or nonchemical alternative to using the pesticide to prevent the imminent spread or arrest the spread of the communicable disease; and

"(iii) the appropriate official of the appropriate department or agency of the country of use consents to the use of such pesticide to prevent the imminent spread or arrest the spread of the communicable disease;

"(B) no quantity of the pesticide shall be exported in excess of a quantity that the Administrator determines to be necessary to accomplish the purpose for the use of such pesticide under this paragraph;

"(C) the exporter agrees to remove from the country of use any unused or excess quantities of the pesticide at the time the Administrator makes a determination that the purpose for the use of such pesticide under this paragraph has been accomplished; and

"(D) the Administrator publishes a notice in the Federal Register that includes—

"(i) the factual basis for any determination that the Administrator makes under this paragraph;

"(ii) the identity of the exporter and the country of use;

"(iii) the quantity and identity of the pesticide (including a complete chemical description of the active ingredient of such pesticide that includes any commonly accepted chemical (generic), or abbreviated chemical name of such active ingredient) that the Administrator authorizes for export under this paragraph; and

"(iv) the estimated dates of export for the pesticide.

"(4) STATUTORY CONSTRUCTION.—Except as specifically provided in this section, paragraphs (1) and (2) shall not be construed so as to allow the Administrator to exempt any pesticide, device, or active ingredient from any requirement under this section.

"(5) ADDITIONAL REQUIREMENTS FOR THE EXPORT OF CERTAIN PESTICIDES.—

"(A) This paragraph applies to a pesticide—

"(i) for which a restricted use classification is effective under section 3;

"(ii) that is subject to an order of suspension under section 6(c);

"(iii) that is the subject of suspension or cancellation proceedings under section 6(b);

"(iv) that is the subject of a conditional registration under section 3(c)(7)(C);

"(v) that is the subject of an interim administrative review described in section 3(c)(8);

"(vi) that is included on the World Health Organization list of Class 1A, 'extremely hazardous', or Class 1B, 'highly hazardous' pesticides; or

"(vii) that was the subject of a registration under section 3 that—

"(I) was canceled; or

"(II) was amended to delete a registered use because of dietary risk associated with the registered use.

"(B) No pesticide described in subparagraph (A) shall be exported unless—

"(i) the exporter provides the notice required in subparagraph (C);

"(ii) the exporter receives from the Administrator written notice that the appropriate official of the appropriate agency of the country of use consents to the import pursuant to subparagraph (E);

"(iii) the country of use is included on the list described in subparagraph (F); and

"(iv) the pesticide is manufactured, processed, packaged, and stored in conformity with standards for composition and quality of the Food and Agriculture Organization of the United Nations.

"(C) No pesticide described in subparagraph (A) may be exported unless, prior to shipment of such pesticide, the exporter provides to the Administrator—

"(i) the common or trade names of any pesticide for export in the country of use, and a complete chemical description of the active ingredient of such pesticide, including any commonly accepted, chemical (generic), or abbreviated chemical name of such active ingredient;

"(ii) the name and the address of the producer and exporter;

"(iii) the name and address of the foreign purchaser;

"(iv) the intended date and quantity of shipment of such pesticide;

"(v) the manner of transport of such shipment;

"(vi) the country of use that is the ultimate destination of such shipment; and

"(vii) the raw agricultural commodity, as defined in section 201(r) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321(r)), on which such pesticide is to be used.

"(D) For each pesticide identified in a notice submitted under subparagraph (C), if such notice is the first such notice that identifies a country of use that is received by the Administrator in the 24-month period immediately preceding the date of the receipt of such notice, the Administrator shall notify the appropriate official in the appropriate regulatory department or agency designated by the country of use and the International Register of Potentially Toxic Chemicals of the intended export. Such notice by the Administrator shall contain a description in English, and in the official language of the country of use, of—

"(i) the information required by subparagraph (C);

"(ii) if the pesticide is subject to a conditional registration under section (3)(c)(7)(C), an interim administrative review or suspension or cancellation proceeding, or is classified for restricted use under this Act, a statement explaining the reasons for such status;

"(iii) alternatives, including nonchemical alternatives to such pesticides; and

"(iv) the name and address of the office of the Environmental Protection Agency that, on request by the foreign purchaser or an appropriate official of the country of use, shall provide additional information concerning such pesticide and alternatives to the use of such pesticide.

"(E)(i) The notice required by subparagraph (D) shall contain a request that the appropriate official of the appropriate regulatory department or agency designated by the country of use provide a written response consenting to, or objecting to, the import of the pesticide that is the subject of such notice.

"(ii) The country of use may attach specified conditions to consenting to importing such pesticide.

"(iii) Not less than 30 days after receipt of a response from such country of use, the Administrator shall forward such response to the exporter.

"(iv) The consent by such country of use, if granted, shall be effective for not more than 24 months after the date of issuance of such response, and such country of use may withdraw such consent at any time on or after the date of issuance of such consent.

"(v) On the expiration of such consent, the Administrator may send such country of use a notice described in subparagraph (D), and such country of use may renew such consent.

"(F)(i) The Administrator shall, by regulation, maintain a list of approved countries of use.

"(ii) No pesticide exported under this section may be shipped to an ultimate destination that is not a country of use listed pursuant to this subparagraph.

"(iii) The Administrator shall include in the list of approved countries of use under this subparagraph Australia, Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, Finland, France, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

"(G)(i) The Administrator shall make additions and deletions to the list of countries of use described in subparagraph (F) pursuant to the criteria described in clause (ii).

"(ii) In considering a country of use for inclusion in the list described in subparagraph (F), the Administrator shall consider whether such foreign country has effective operating statutory or regulatory requirements—

"(I) that provide for the review of such pesticides to determine their effects on humans and the environment, that may be—

"(aa) made independently by the country of use by persons employed by the government of the country of use having suitable scientific training and who are not agents of, employed by, or otherwise associated with any manufacturer or seller of pesticides, or

"(bb) made by adopting, as authoritative, by law or regulation, the findings of the United States Environmental Protection Agency concerning the effects of such pesticides;

"(II) that adequately regulate the methods of manufacturing, processing, packaging, and distribution of pesticides to ensure the preservation of the identity, quality, purity, and strength of such pesticide;

"(III) for reviewing the approval of pesticides, and for removing from the market any pesticide found to be unsafe or ineffective;

"(IV) to ensure that the labeling and use of pesticides are in accordance with the terms of approval of such pesticides; and

"(V) to ensure that the advertising and promotion of pesticides--

"(aa) encourages use only in accordance with regulatory approvals;

"(bb) notifies users of any health hazards associated with such pesticides; and

"(cc) is not false or misleading.

"(iii) The Administrator shall make any addition or deletion to the list described in subparagraph (F) by regulation. The Administrator shall publish a notice of any intended addition or deletion to such list, and shall provide a 60-day period for public comment after the date of the publication of such notice.

"(H) REVIEW PROCESS.—The Administrator shall develop and implement a review process to review each foreign country on the list described in subparagraph (F) not more than 3 years after such foreign country is listed, and every 3 years thereafter, to ascertain whether such country meets the criteria described in subparagraph (G)(ii).

"(6) LABELS.—The label of any pesticide intended for export from the United States shall—

"(A) be written in the official language of the country of use; and

"(B) contain any health, safety, environmental and other related information, as determined by the Administrator, required to be included under section 3 in a label for a pesticide for use in the United States.

"(7) SPECIAL EXEMPTION FOR THE EXPORT OF EXPERIMENTAL PESTICIDES.—

"(A) Notwithstanding paragraphs (1)(B), (2), and (4), an exporter may export a pesticide for experimental use for use in a foreign country if such pesticide for experimental use—

"(i) contains an active ingredient that is not and has not been the subject of any registration under section 3;

"(ii) shall be used only for the purpose of acquiring the information necessary for registering such pesticide under section 3; and

"(iii) is the subject of an experimental use permit issued by the Administrator under section 5(a).

"(B) Nothing in this paragraph shall be interpreted so as to authorize the export of a pesticide for experimental use without the written consent of the government of the country of use. Such consent shall be obtained in the manner prescribed under subparagraph (C).

"(C)(i) In order to obtain the written consent of the government of country of use, the holder of an experimental use permit described in section 5(a) shall submit a written request for permission to export the pesticide for experimental use to the Administrator.

"(ii) The Administrator shall transmit to the appropriate official in the appropriate agency responsible for the regulation of pesticides in the country of use—

"(I) such written request;

"(II) a summary of all available information relating to the actual and potential adverse effects of the pesticide for experimental use on human health and the environment prepared by the Administrator; and

"(III) a complete statement of the factual basis for the issuance by the Administrator of an experimental use permit under section 5(a) for such pesticide.

"(iii) On transmitting such request for permission to export the pesticide for experimental use, the Administrator shall publish in the Federal Register a notice of the transmittal of such request. Such notice shall identify—

"(I) the pesticide for experimental use that is the subject of such request;

"(II) the producer and exporter of such pesticide; and

"(III) the country of use to which the request for permission to export such pesticide was transmitted.

"(iv) The written request transmitted by the Administrator to the country of use shall be subject to public review.

"(D) A written request for transmittal by the Administrator to a country of use shall identify the pesticide for experimental use and the active ingredients of such pesticide and include—

"(i) the trade name of the pesticide;

"(ii) the chemical name of such pesticide (including any commonly accepted, generic, or abbreviated chemical name);

"(iii) the proposed experimental use for such pesticide in the country of use;

"(iv) the amount of such pesticide proposed to be used in such country of use and the proposed method of use;

"(v) the intended effect of such pesticide;

"(vi) the producer and exporter of such pesticide; and

"(viii) the individual who shall supervise the experimental use of such pesticide on behalf of the producer or exporter.

"(E) On the request of the appropriate official of the country of use, the Administrator shall provide a copy of any records in the files of the Administrator associated with the issuance of an experimental use permit issued pursuant to section 5(a) for the pesticide for experimental use that is the subject of a request under this paragraph.

"(F) The appropriate official of the country of use may consent, deny consent, or consent to such request on such terms and conditions as such official determines to be appropriate. If the official sends a written notice of consent to the use of the pesticide for experimental use to the Administrator, the Administrator shall notify the exporter of such pesticide, and shall publish a notice of the consent of such country of use in the Federal Register. On the publication of such consent, the exporter of such pesticide may export such pesticide in accordance with—

"(i) the terms of the experimental use permit issued under section 5(a); and

"(ii) any term or condition in the written notice of consent issued by the official of country of use.

"(G) The written notice of consent issued by the official of the country of use shall be subject to public review and inspection.

"(H) A producer or exporter of a pesticide that exports a pesticide for experimental use to a country of use pursuant to this paragraph shall be subject to the requirements of sections 2(p), 2(q), 7, and 8.

"(b) NOTICES OF REGULATORY EVENTS FURNISHED TO FOREIGN GOVERNMENTS.—

"(1) IN GENERAL.—The Administrator shall, not more than 30 days after any of the events described in subparagraphs (A) through (D), transmit a notice to the appropriate officials of the appropriate departments or agencies of all countries, and to the office responsible for the International Registry of Potentially Toxic

Chemicals. The Administrator shall provide such notice each time—

"(A) a registration, a cancellation (whether voluntary or involuntary) or a suspension of the registration of a pesticide becomes effective or ceases to be effective under this Act;

"(B) a pesticide is classified for restricted use under this Act;

"(C) a registration of a pesticide is made subject to conditions under section 3(c)(7);

"(D) a pesticide is made subject to an interim administrative review under section 3(c)(8); or

"(E) the Administrator takes any action that is based on or reflects information or determinations that relate to the effect of a pesticide on human health.

"(2) CONTENTS OF NOTICE.—A notice described in paragraph (1) shall include—

"(A) the factual basis on which the Administrator issued findings in support of any regulatory action described in subparagraphs (A) through (D) of paragraph (1);

"(B) an explanation of the legal significance of such regulatory action;

"(C) in the case of any action that causes a pesticide to be subject to subsection (a)(2)—

"(i) information concerning other pesticides registered under section 3 that could be used as an alternative to such pesticide including—

"(I) a complete summary of the regulatory status under this Act of any such pesticide; and

"(II) a summary of any possible adverse effects on human health or on the environment that any such pesticide may cause;

"(ii) nonchemical alternatives to such pesticide;

"(iii) the names and addresses of international organizations that the Administrator determines to be capable of providing information concerning nonchemical alternatives to such pesticide; and

"(iv) the name and address of the office of the Environmental Protection Agency that shall, on request, provide additional information concerning any pesticide that is subject to regulatory action, and alternatives to such pesticide.

"(c) IMPORTATION OF PESTICIDES AND DEVICES.—The Secretary of the Treasury shall notify the Administrator of the arrival of pesticides and devices and shall deliver to the Administrator, upon his request, samples of pesticides or devices which are being imported into the United States, giving notice to the owner or consignee, who may appear before the Administrator and have the right to introduce testimony. If it appears from the examination of a sample that it is adulterated, or misbranded or otherwise violates the provisions set forth in this Act, or is otherwise injurious to health or the environment, the pesticide or device may be refused admission, and the Secretary of the Treasury shall refuse delivery to the consignee and shall cause the destruction of any pesticide or device refused delivery which shall not be exported by the consignee within 90 days from the date of notice of such refusal under such regulations as the Secretary of the Treasury may prescribe. The Secretary of the Treasury may deliver to the consignee such pesticide or device pending examination and decision in the matter on execution of bond for the amount of the full invoice value of such pesticide or device, together with the duty thereon, and on refusal to return such pesticide or device for any cause to the custody of the Secretary of the Treasury, when demanded, for the purpose of excluding them from the country, or for any other purpose, said consignee shall forfeit the full amount of said bond. All charges for storage, cartage, and labor on pesticides or devices which are refused admission or delivery shall be paid by the owner or consignee, and in default of such payment shall constitute a lien against any future importation made by such owner or consignee.

"(d) COOPERATION IN INTERNATIONAL EFFORTS.—The Administrator shall, in cooperation with the Agency for International Development of the Department of State, the Food and Drug Administration of the Department of Health and Human Services, the United States Department of Agriculture, and any other appropriate Federal agencies or departments, the United Nations Environment Program and agencies, Food and Agriculture Organization, and other private and international organizations that the Administrator determines to be appropriate—

"(1) convene, not later than 1 year after the date of the enactment of this section, a meeting of representatives of foreign governments, nongovernmental organizations, and other interested parties, and sponsor such additional meetings, as the Administrator determines to be necessary to promote the development and implementation of improved research and regulatory programs for pest management, and improved strategies for sustainable agriculture, including the promotion and development of integrated pest management;

"(2) provide foreign countries with technical assistance to develop comprehensive pesticide regulatory programs;

"(3) not later than 1 year after the date of enactment of this section, and every 3 years thereafter, conduct, publish, and transmit to Congress a study of all countries that import pesticides from United States exporters and from which the United States imports agricultural commodities, to—

"(A) ascertain the procedures that are implemented by each such country regarding registration, labeling, and training to ensure safe handling, transportation, application, and disposal of pesticides;

"(B) ascertain the procedures that are implemented by each such country to control residues on foods in order to meet tolerances established under United States law; and

"(C) determine whether the Food and Drug Administration of the Department of Health and Human Services and the United States Department of Agriculture are able to test effectively for residues of pesticides; and

"(4) not later than 1 year after the date of enactment of this section, convene, a meeting of representatives of foreign governments, nongovernmental organizations, and other interested parties, and sponsor such other meetings as may be necessary, to actively encourage the adoption of a binding multilateral convention requiring standard, mandatory notice and export control measures for pesticides.".

## SEC. 106. CONFORMING AMENDMENTS TO TABLE OF CONTENTS.

The table of contents in section 1(b) of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. prec. 121) is amended—

(1) by adding at the end of the items relating to section 2 the following new items:

"(hh) Country of use.
"(ii) Exporter.";

and

(2) by striking the items relating to section 17 and inserting the following new items:

"Sec. 17. Imports and exports.
"(a) Pesticides and devices intended for export.
"(1) In general.
"(2) Export of pesticides.
"(3) Statutory construction.
"(4) Additional requirements for the export of certain pesticides.
"(5) Labels.
"(6) Special exemption for the export of experimental pesticides.
"(b) Notices of regulatory events furnished to foreign government.
"(1) In general.
"(2) Contents of notice.
"(c) Importation of pesticides and devices.
"(d) Cooperation in international efforts.".

# TITLE II—TOLERANCES FOR AGRICULTURAL COMMODITIES

## SEC. 201. TOLERANCES FOR AGRICULTURAL COMMODITIES.

(a) REVOCATIONS.—Section 408 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 346a) is amended by adding at the end the following new subsection:

"(p)(1)(A) If all of the registrations of a pesticide chemical under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.) for use on a particular raw agricultural commodity, or a class of raw agricultural commodities, as determined by the Administrator, have been—

"(i) canceled by the Administrator under section 6 of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136d);

"(ii) voluntarily canceled or withdrawn by a registrant; or "(iii) modified to eliminate the use of the pesticide chemical on the raw agricultural commodity or class of raw agricultural commodities;

the Administrator shall, not later than 30 days after the date on which clause (i), (ii), or (iii) initially applies to the pesticide chemical, publish a notice in the Federal Register announcing the revocation of any tolerance for such use established under subsection (b) or an exemption under subsection (c) for such pesticide chemical in or on such raw agricultural commodity or class of raw agricultural commodities.

"(B) The effective date of a revocation described in subparagraph (A) shall be 180 days after the date on which clause (i), (ii), or (iii) of paragraph (A) initially applies to the pesticide chemical.

"(C) Not later than 30 days after the date of the publication in the Federal Register of the notice described in subparagraph (A), a person who registered a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.) to which clause (i), (ii), or (iii) of subparagraph (A) applies may submit an application to the Administrator for a temporary waiver from a revocation described in subparagraph (A). Such application shall include a complete statement of the factual basis for such request for a temporary waiver. The Administrator may issue a temporary waiver that may be effective for a period of time that shall not exceed 12 months under this subparagraph only for the purpose of distributing in commerce a raw agricultural commodity or a class of raw agricultural commodities that contain a residue of such pesticide chemical that occurred as a result of—

"(i) the application of the pesticide chemical before the date on which clause (i), (ii), or (iii) of subparagraph (A) initially applied; or

"(ii) residual environmental contamination.

"(D) On receipt of an application described in subparagraph (C), the Administrator shall—

"(i) publish a notice of the application in the Federal Register; and

"(ii) make available the application and any supporting documents for public review.

The Administrator shall provide an opportunity for any interested party to provide comments during a period of not less than 60 days, beginning on the date that the notice is published.

"(E) On the completion of the comment period described in subparagraph (D), the Administrator may issue a temporary waiver under this paragraph to the applicant if the Administrator makes a determination that there is no substantial evidence that the temporary waiver—

"(i) poses a dietary health risk to humans; and "(ii) would cause significant economic hardship for domestic producers of a raw agricultural commodity or a class of raw agricultural commodities attributable to competition from producers of the raw agricultural commodity or class of raw agricultural commodities in a foreign country in which use of the pesticide chemical is permitted.

"(2)(A) If all of the registrations of a pesticide chemical under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.) for use on a particular raw agricultural commodity, or a class of raw agricultural commodities, as determined by the Administrator are—

"(i) the subject of an order of suspension; or

"(ii) the subject of an order of emergency suspension;

the Administrator shall not later than 20 days after the date on which clause (i) or (ii) initially applies to the pesticide chemical, publish a notice in the Federal Register announcing the suspension of any tolerance for such use established under subsection (b) or an exemption under subsection (c) for such pesticide chemical in or on such raw agricultural commodity or class of raw agricultural commodities.

"(B) The effective date of a suspension described in subparagraph (A) shall be 90 days after the date on which clause

(i) or (ii) of subparagraph (A) initially applies to the pesticide chemical.

"(C) Not later than 30 days after the date of the publication of the notice described in subparagraph (A) in the Federal Register, a person who registered a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.) to which clause (i) or (ii) of subparagraph (A) applies may submit an application to the Administrator for a temporary waiver from a suspension described in subparagraph (A). Such application shall include a complete statement of the factual basis for such request for a temporary waiver. The Administrator may issue a temporary waiver under this subparagraph only for the purpose of distributing in commerce a raw agricultural commodity or a class of raw agricultural commodities that contain a residue of such pesticide chemical that occurred as a result of—

"(i) the application of the pesticide chemical before the date on which clauses (i) and (ii) initially applied; or

"(ii) residual environmental contamination.

"(D) On receipt of an application described in subparagraph (C), the Administrator shall follow the procedure for notice and comment described in subparagraph (D) of paragraph (1).

"(E) On completion of a comment period, as described in subparagraph (D) of paragraph (1), the Administrator may issue a temporary waiver under this subparagraph if the Administrator makes a determination that there is no substantial evidence that the temporary waiver—

"(i) poses a dietary health risk to humans; and

"(ii) would cause significant economic hardship for domestic producers of a raw agricultural commodity or a class of raw agricultural commodities attributable to competition from producers of the raw agricultural commodity or class of raw agricultural commodities in a foreign country in which the use of the pesticide chemical is permitted.".

## SEC. 202. TOLERANCES.

Section 408 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 346a) (as amended by section 201 of this Act) is further amended by adding at the end the following new subsection:

"(q)(1)(A) Except as provided in paragraph (2), the Administrator shall not establish a tolerance for a pesticide chemical with respect to use in or on a raw agricultural commodity, or applicable to processed food (as described in section 402) or leave in effect any such existing tolerance, unless the Administrator determines, after consultation with the Secretary, that a practical method exists for detecting and measuring the levels of such pesticide chemical on such raw agricultural commodity or processed food at the level of the pesticide chemical established by the tolerance.

"(B) The Administrator may determine a method for detecting and measuring the levels of a pesticide chemical to be practical for the purposes of subparagraph (A) only if the Secretary is able to perform such method on a routine basis as part of surveillance and compliance sampling of raw agricultural commodities and processed foods for pesticide chemicals with the personnel, equipment, and other resources available to the Secretary. In making a determination whether a method is practical for the purposes of subparagraph (A), the Administrator shall give significant weight to a consideration of whether such method has a reasonable capability for detecting and measuring the presence of a plurality of pesticide chemicals on the raw agricultural commodity or processed food to which the tolerance applies.

"(2)(A) If the Administrator determines that a method for detecting and measuring the levels of a pesticide chemical described in paragraph (1)(A) does not have the capability of detecting a plurality of pesticide chemicals on the raw agricultural commodity or processed food to which a tolerance applies, but is the only practical method for detecting a pesticide chemical pursuant to paragraph (1)(A), the Administrator may establish a tolerance for such pesticide chemical or make a determination to leave in effect any existing tolerance for such pesticide chemical in accordance with the conditions described in subparagraph (B).

"(B) If the Administrator establishes a tolerance for a pesticide chemical, or allows such tolerance to remain in effect pursuant to subparagraph (A), the Administrator shall terminate such tolerance 2 years after the date that the Administrator establishes such tolerance or makes a determination to leave in effect such tolerance, pursuant to subparagraph (A).

"(C) On the termination of a tolerance pursuant to subparagraph (B), the Administrator may, on completion of a review and determination conducted in accordance with subparagraph (A), authorize a subsequent 2-year restoration period for such tolerance.".

### SEC. 203. IMPORTS AND EXPORTS.

(a) DISCLOSING OF PESTICIDES IN IMPORT DOCUMENTS.—

(1) IN GENERAL.—Section 801 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 381) is amended—

(A) by redesignating subsection (d) as subsection (e); and

(B) by inserting after subsection (c) the following new subsection:

"(d)(1)(A) No food may be admitted into the customs territory of the United States (as defined in general note 2 of the Harmonized Tariff Schedule of the United States) unless the importer of the specified agricultural commodity files with the Secretary and the Secretary of the Treasury, in accordance with subparagraph (B), an import document that identifies each pesticide chemical known to be or customarily used on, or in connection with the production of, food by any agricultural producer or group of agricultural producers of the food.

"(B) On or before the date on which the food is imported, the importer described in subparagraph (A) shall file with the Secretary and the Secretary of the Treasury the import document described in subparagraph (A).

"(2)(A) Except as provided in subparagraph (C), if the Secretary determines that a sample of the food submitted as a food sample described in subsection (a) contains a pesticide chemical that was not reported in the import document described in paragraph (2) (hereinafter in this paragraph referred to as the 'unreported pesticide chemical'), the Secretary shall, except as provided in subparagraph (B), require that the importer file with any import document for any subsequent shipment of the food listed in the import document for the shipment associated with the sample—

"(i) the results of an analysis designed to detect levels of residues of the unreported pesticide chemical; and

"(ii) the results of an analysis designed to detect the levels of all residues of other pesticide chemicals used on, or in connection with the production of, the food, as determined by the Secretary.

"(B) The Secretary may waive the requirements of clauses (i) and (ii) of subparagraph (A) after the importer has demonstrated a clear pattern of consistent compliance under subparagraph (A), as determined in regulations prescribed by the Secretary. The regulations shall require that the Secretary take into account whether the failure of the importer to include an unreported pesticide chemical in an import document described in paragraph (2) is the first such failure by the importer.

"(C) Subparagraph (A) shall not apply if the importer described in subparagraph (A) demonstrates to the satisfaction of the Secretary that—

"(i) the unreported pesticide chemical in or on the food is attributable to the long-term environmental persistence of the pesticide; and

"(ii) the level of the residue of the pesticide chemicals in or on the food does not pose a risk to human health.

"(3) To the extent allowable by law, the Secretary shall, on request by the appropriate official of a State agency or department responsible for the monitoring of food for residues of pesticide chemicals in or on the food, provide to the official any information obtained by the Secretary in the administration of this subsection.".

(2) CONFORMING AMENDMENT.—Section 304(d)(1) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 334(d)(1)) is amended by striking "801(d)" each place it appears and inserting "801(e)".

(b) MEAT.—Section 20 of the Federal Meat Inspection Act (21 U.S.C. 620) is amended by adding at the end the following new subsection:

"(i)(1)(A) No meat food product may be admitted into the customs territory of the United States (as defined in general note 2 of the Harmonized Tariff Schedule of the United States) unless the importer of the food product files with the Secretary and the Secretary of the Treasury, in accordance with subparagraph (B), an import document that identifies each pesticide chemical known to be or customarily used on, or in connection with the production of, the product by any agricultural producer or group of agricultural producers of the product.

"(B) On or before the date on which the product is imported, the importer described in subparagraph (A) shall file with the Secretary and the Secretary of the Treasury the import document described in subparagraph (A).

"(2)(A) Except as provided in subparagraph (C), if the Secretary determines that a sample of the product submitted under subsection (f) contains a pesticide chemical that was not reported in the import document described in paragraph (1) (hereinafter in this paragraph referred to as the 'unreported pesticide chemical'), the Secretary shall, except as provided in subparagraph (B), require that the importer file with any import document for any subsequent shipment of the product listed in the import document for the shipment associated with the sample—

"(i) the results of an analysis designed to detect levels of residues of the unreported pesticide chemical; and

"(ii) the results of an analysis designed to detect the levels of all residues of other pesticide chemicals used on, or in connection with the production of, the product, as determined by the Secretary.

"(B) The Secretary may waive the requirements of clauses (i) and (ii) of subparagraph (A) after the importer has demonstrated a clear pattern of consistent compliance under subparagraph (A), as determined in regulations prescribed by the Secretary. The regulations shall require that the Secretary take into account whether the failure of the importer to include an unreported pesticide chemical in an import document described in paragraph (1) is the first such failure by the importer.

"(C) Subparagraph (A) shall not apply if the importer described in subparagraph (A) demonstrates to the satisfaction of the Secretary that—

"(i) the unreported pesticide chemical in or on the product is attributable to the long-term environmental persistence of the pesticide; and

"(ii) the level of the residue of the pesticide chemicals in or on the product does not pose a risk to human health.

"(3) To the extent allowable by law, the Secretary shall, on request by the appropriate official of a State agency or department responsible for the monitoring of food for residues of pesticide chemicals in or on the food, provide to the official any information obtained by the Secretary in the administration of this subsection.".

(c) POULTRY.—Section 17 of the Poultry Products Inspection Act (21 U.S.C. 466) is amended by adding at the end the following new subsection:

"(e)(1)(A) No imported poultry product described in subsection (d) may be admitted into the customs territory of the United States (as defined in general note 2 of the Harmonized Tariff Schedule of the United States) unless the importer of the product files with the Secretary and the Secretary of the Treasury, in accordance with subparagraph (B), an import document that identifies each pesticide chemical known to be or customarily used on, or in connection with the production of, the product by any agricultural producer or group of agricultural producers of the product.

"(B) On or before the date on which the product is imported, the importer described in subparagraph (A) shall file with the Secretary and the Secretary of the Treasury the import document described in subparagraph (A).

"(2)(A) Except as provided in subparagraph (C), if the Secretary determines that a sample of the product submitted under subsection (d) contains a pesticide chemical that was not reported in the import document described in paragraph (1) (hereinafter in this paragraph referred to as the 'unreported pesticide chemical'), the Secretary shall, except as provided in subparagraph (B), require that the importer file with any import document for any subsequent shipment of the product listed in the import document for the shipment associated with the sample—

"(i) the results of an analysis designed to detect levels of residues of the unreported pesticide chemical; and

"(ii) the results of an analysis designed to detect the levels of all residues of other pesticide chemicals used on, or in connection with the production of, the product, as determined by the Secretary.

"(B) The Secretary may waive the requirements of clauses (i) and (ii) of subparagraph (A) after the importer has demonstrated a clear pattern of consistent compliance under subparagraph (A), as determined in regulations prescribed by the Secretary. The regulations shall require that the Secretary take into account whether the failure of the importer to include an unreported pesticide chemical in an import document described in paragraph (1) is the first such failure by the importer.

"(C) Subparagraph (A) shall not apply if the importer described in subparagraph (A) demonstrates to the satisfaction of the Secretary that—

"(i) the unreported pesticide chemical in or on the product is attributable to the long-term environmental persistence of the pesticide; and

"(ii) the level of the residue of the pesticide chemicals in or on the product do not pose a risk to human health.

"(3) To the extent allowable by law, the Secretary shall, on request by the appropriate official of a State agency or department responsible for the monitoring of food for residues of pesticide chemicals in or on the food, provide to the official any information obtained by the Secretary in the administration of this subsection.".

(d) EGGS.—Section 17 of the Egg Products Inspection Act (21 U.S.C. 1046) is amended by adding at the end the following new subsection:

"(e)(1)(A) No imported egg or egg product described in subsection (a) may be admitted into the customs territory of the United States (as defined in general note 2 of the Harmonized Tariff Schedule of the United States) unless the importer of the egg or egg product files with the Secretary and the Secretary of the Treasury, in accordance with subparagraph (B), an import document that identifies each pesticide chemical known to be customarily or used on, or in connection with the production of, the egg or egg product by any agricultural producer or group of agricultural producers of the egg or egg product.

"(B) On or before the date on which the egg or egg product is imported, the importer described in subparagraph (A) shall file with the Secretary and the Secretary of the Treasury the import document described in subparagraph (A).

"(2)(A) Except as provided in subparagraph (C), if the Secretary determines that a sample of the egg or egg product submitted under subsection (a) contains a pesticide chemical that was not reported in the import document described in paragraph (1) (hereinafter in this paragraph referred to as the 'unreported pesticide chemical'), the Secretary shall, except as provided in subparagraph (B), require that the importer file with any import document for any subsequent shipment of the egg or egg product listed in the import document for the shipment associated with the sample—

"(i) the results of an analysis designed to detect levels of residues of the unreported pesticide chemical; and

"(ii) the results of an analysis designed to detect the levels of all residues of other pesticide chemicals used on, or in connection with the production of, the egg or egg product, as determined by the Secretary.

"(B) The Secretary may waive the requirements of clauses (i) and (ii) of subparagraph (A) after the importer has demonstrated a clear pattern of consistent compliance under subparagraph (A), as determined in regulations prescribed by the Secretary. The regulations shall require that the Secretary take into account whether the failure of the importer to include an unreported pesticide chemical in an import document described in paragraph (1) is the first such failure by the importer.

"(C) Subparagraph (A) shall not apply if the importer described in subparagraph (A) demonstrates to the satisfaction of the Secretary that—

"(i) the unreported pesticide chemical in or on the egg or egg product is attributable to the long-term environmental persistence of the pesticide; and

"(ii) the level of the residue of the pesticide chemicals in or on the egg or egg product do not pose a risk to human health.

"(3) To the extent allowable by law, the Secretary shall, on request by the appropriate official of a State agency or department responsible for the monitoring of food for residues of pesticide chemicals in or on the food, provide to the official any information obtained by the Secretary in the administration of this subsection.".

# TITLE III—EFFECTIVE DATES

## SEC. 301. EFFECTIVE DATES.

(a) EXPORTED PESTICIDES.—

(1) IN GENERAL.—Except as provided in paragraph (2), the amendments made by sections 101 through 106 shall become effective 6 months after the date of the enactment of this Act.

(2) EXCEPTION.—Paragraph (5) of section 17(a) of the Federal Insecticide, Fungicide, and Rodenticide Act (as amended by section 105) shall become effective 1 year after the date of enactment of this Act, except that—

(A) exporters may submit notices pursuant to section 17(a)(5)(C) of such Act on the date of enactment of this Act; and

(B) the Administrator may implement the provisions of subparagraphs (D) through (F) of section 17(a)(5) of such Act on the date of enactment of this Act.

(b) Tolerances.—The amendments made by sections 201 through 203 shall become effective 1 year after the date of enactment of this Act.

○